

BOSTON'S OWN COMPUTER NEWSMAGAZINE SINCE 1986

COMPUTER *Currents*

Volume 7 Number 2

MONTHLY

February 1992

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Super Word Processing

*Software With the
Write Stuff*

INSIDE

DEC's Foray Into
Mail-Order PCs

High Marks For
WordPerfect
For Windows

Nifty \$80 Speed-Up
For Windows

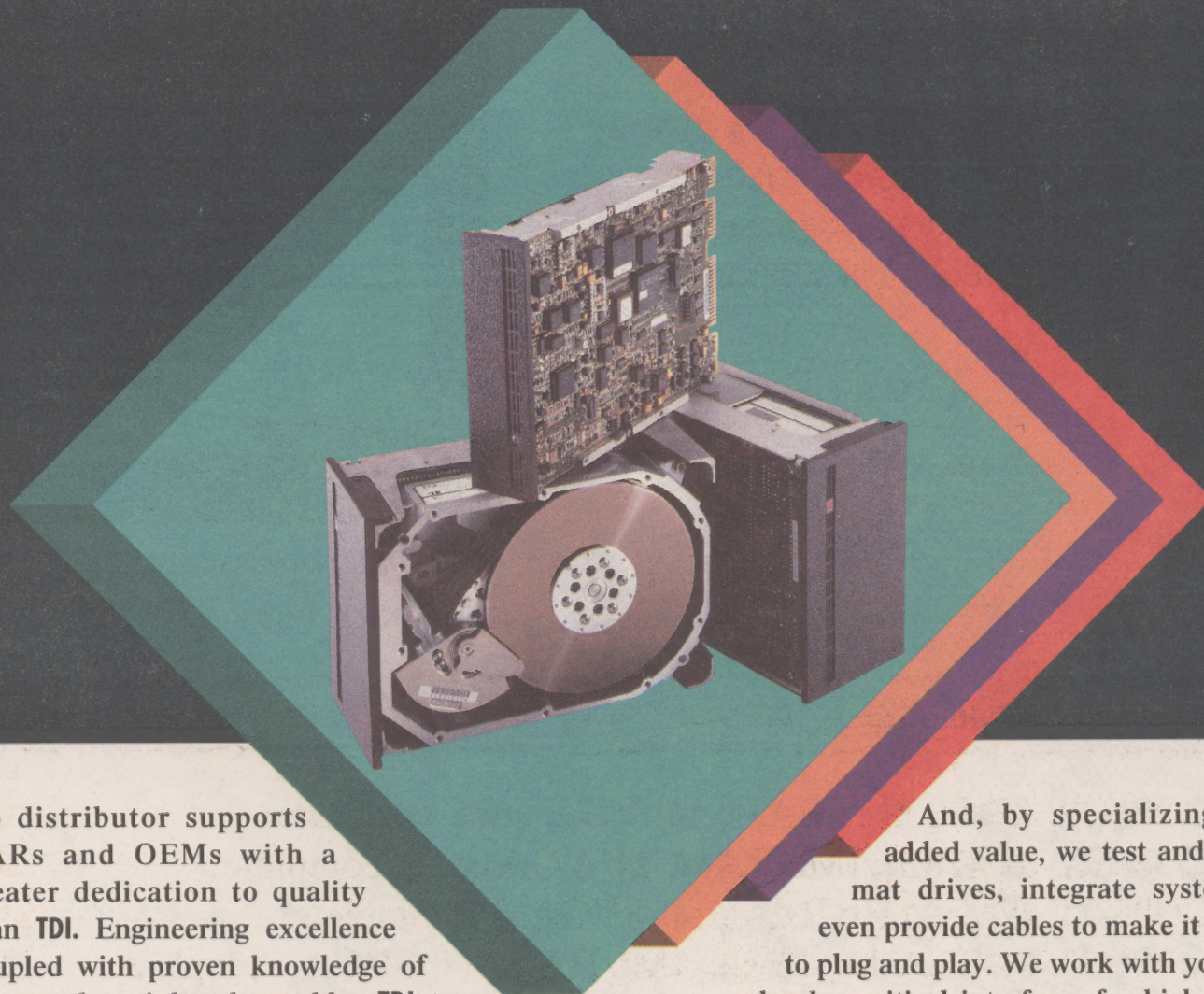
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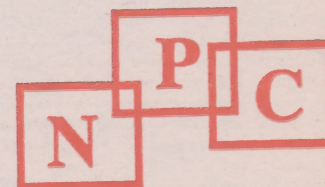
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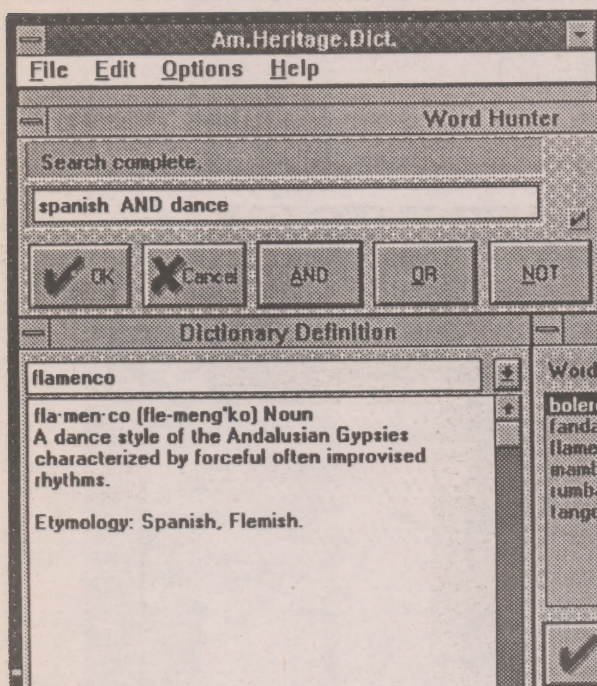
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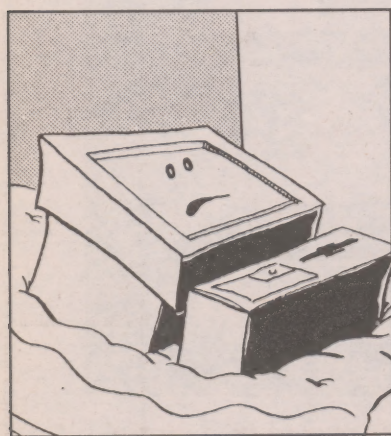
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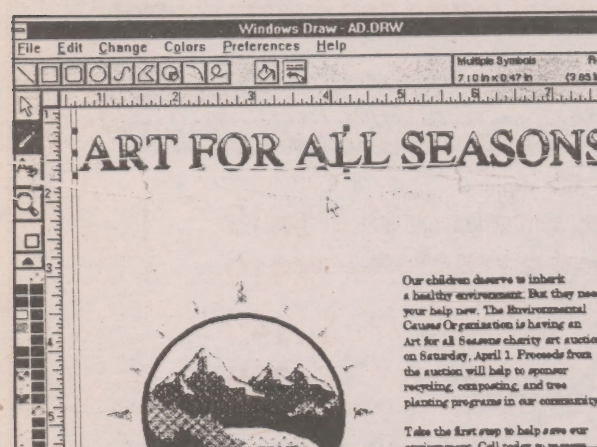
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COMPUTER CURRENTS

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FEBRUARY 1992

SUPER WORD PROCESSING

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Processing words now means spell checking, grammar checking, and style checking, in addition to cut and paste. Complete online-reference sources are available to the user including thesauruses, translation guides and quotation dictionaries. Our cover story clears up the choices so you can clear up your writing.

By Lawrence J. Magid

NETWORLD '92

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A host of new products will be announced at this year's NetWorld Boston trade show and conference. Here's a look at some of them.

By Marguerite Zientara

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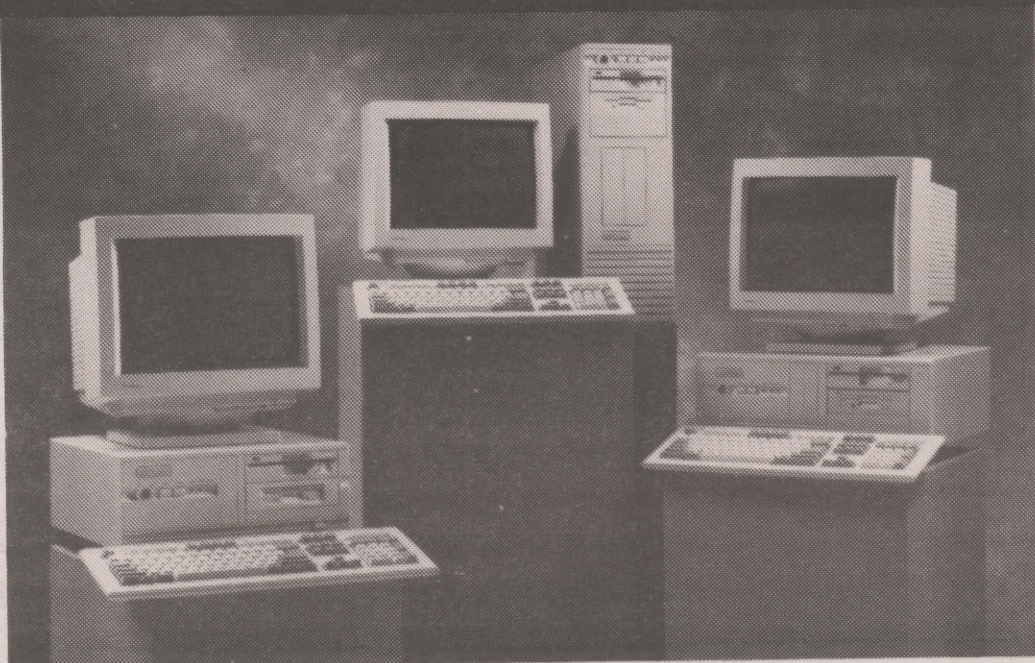
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PC Market Needs to Widen



There's a particular "conventional wisdom" pervasive in computer industry circles these days that says most PC sales are to people, companies, and institutions that already own computers. Market research numbers generally verify this trend as being several years old and growing.

The problem, as I see it, is that this "replacement PC" mindset is fast becoming a self-fulfilling prophecy that's a danger to the growth of the industry. If manufacturers think the only people buying PCs are those who already have them, then the tendency is to design products that are incremental (if not merely stylish!) improvements to what those customers already have, similar to the car industry.

For sure, there is a huge installed base of computer customers out there that shouldn't be ignored. Ever faster 386 and 486 systems, networks, and sophisticated software applications are welcome advances. But there are still millions of individuals, and thousands of small businesses, who could benefit from owning a computer, who are afraid or unwilling to make the investment.

Lower-cost Macintoshes, GeoWorks, Windows and other easy-to-use products for the PC are signs of a real renaissance in affordable easier-to-use systems. Even CD-ROM drives for access to massive reference works and multimedia have come down in price to the point where some vendors are including them in "home computer" systems. Similarly, the IBM/Sears Prodigy online service and many other commercial and local BBS systems have consumer appeal. I applaud these developments, and hope we see a lot more of the same in the year ahead. There's a lot of room for consumer-oriented improvements and innovation that would help that person we all know who is struggling with the decision to buy his or her first computer.

Television, for all its faults, represents an inescapable benchmark of acceptable performance in ease of use and lifelike display that is light years ahead of personal computing. The gap is closing, but not as fast as many in the computer industry would like us to believe. Hopefully, we'll all have a good laugh a mere few years from now over the whiz-bang technology of the early '90s because it will look so crude.

While the installed base of PCs numbers in the millions, "still undecided" represents by far the biggest piece of the pie. Computer vendors can't afford to ignore it.

David Needle

LETTERS

MIS Managers Aren't All Bad

Editor:

I feel compelled to respond to Michael Talman's letter in your December 1991 issue. Though I agree with much of what he says, there are a few points where we disagree.

His characterization of the "data processing department priesthood" clawing up out of their graves and trying to suck the life out of the living is painted just a wee bit too broadly. I can't speak for the MIS "priests" at all companies, but I've yet to run into any that are as bad as he makes them sound. The MIS people I work with are quite happy to assist a user with setting up new applications on PCs. We encourage people to make creative use of their machines and we work hard to help people be as productive as possible.

Because we have to support a large number of PCs with only one full-time PC staffer (budgets are tight and the rest of us help out as needed), it is imperative that some degree of standardization be enforced. This basically means that we have selected "approved" software for most of the major applications. This doesn't mean that we have them chained in some hideous, confining Multimate/Visicalc/dBase II/DOSShell dungeon of archaic and useless products. WordPerfect 5.1, Lotus 1-2-3 3.1, and either Q&A or Paradox (depending on the application) are our main software standards.

At the bank where I work we have perhaps 200 PC users. Maybe five percent of them are knowledgeable enough to make an informed decision regarding software selection. Of the very few who have any opinions about the subject at all, almost all agree with our choices. It would be nice if more of them were more PC literate but unfortunately they aren't. At least not yet, anyway. I hope that will change soon.

We build custom menu-driven batch files on each machine to run all of their software, format floppy disks, perform backups, and anything else they need to do. Most of them never need to learn anything more than how to select an application from a menu and use it. We do as much as possible to insulate them from cryptic DOS commands.

Mr. Talman states that "Personal computing is about the ability to choose your own tools

to do your job with maximum efficiency." This would be fine if each of us were going to pay for our own tools, provide our own support, train ourselves, and if we never needed to share data. For most users, however, the reality is that they depend on the company to purchase the hardware and software and provide support and training, and we need to share data with other users frequently.

Like most companies, we go to a great deal of trouble to evaluate all appropriate products as well as our users' needs before we choose a standard. A product is selected because it can meet as many of those needs as possible without being too costly to implement. Very little differentiates the current crop of high-end products in any category. Since 90 percent of our users probably never use more than about 20 percent of the features available in their products, we also look for ease of use, third-party support, ease of integration with other products, compatibility with our hardware standards, stability, market share, and the quality of the manufacturer's technical support.

We need to be able to freely exchange files among users. By having one standard word processor, anybody can give a document to anybody (via Ethernet or sneakernet) and there are no hassles with file conversion. User support is better, because the help desk personnel don't have to know the ins and outs of every product available. Furthermore, we only have to train somebody how to use a word processor or other piece of software once. Can you imagine how much it would cost to retrain people every time they moved to a different department because the software used there was Microsoft Word or WordStar rather than WordPerfect?

Perhaps when file interchange standards are established that allow easy integration of any combination of packages, and when common user interface standards exist in a stable, well supported environment, each corporate user can have more freedom of choice. That day is coming (I hope) but for now such anarchy is just not practical, no matter how appealing it may be.

*Michael Haggerty
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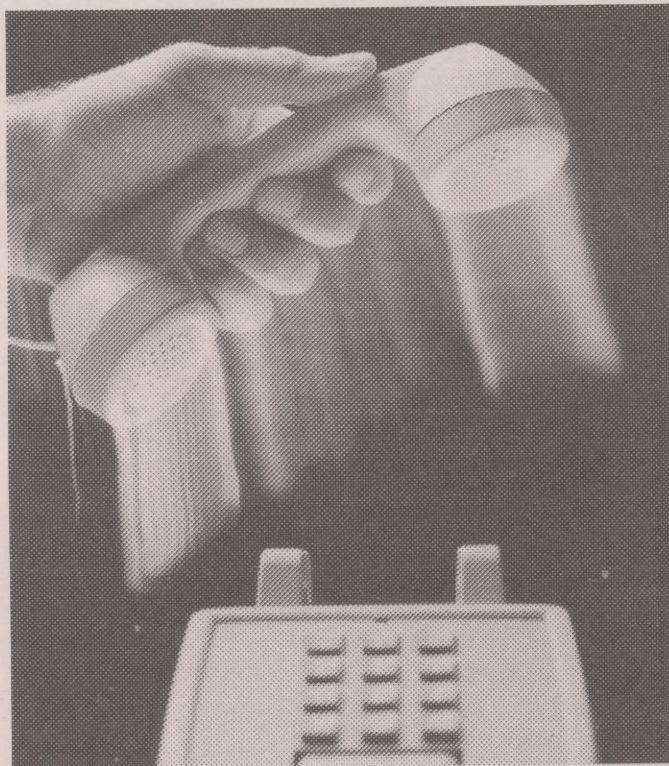
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NATIONAL STRENGTH WITH A PERSONAL TOUCH



By Marguerite Zientara

"Can an 8,000-lb. Elephant Outrun the Gazelles?" — DEC's Foray Into Mail-Order PCs

That's the question Digital Equipment Corp. (DEC) poses in its new PC mail-order literature, and it hopes the answer is "Yes." With the stated goal of joining IBM, Apple and Compaq at the top of the PC vendor charts within 3-4 years, DEC is now offering custom-assembled industry standard PCs shipped to your door within 48 hours.

By selling through mail-order, DEC is putting itself up against such fleet-footed competitors as Dell, Northgate and CompuAdd. For DEC, Desktop Direct has brought about dramatic changes in the way it assembles PCs. Whereas DEC used to stock complete systems on the shelf, and customize from the top down, now it stocks only parts.

"Instead of starting with a system that might have to have something taken out of it, or shifted around, we're building them all from scratch in 48 hours, right to the customer spec," says Dennis Schneider, director of marketing for DEC's U.S. Desktop Business.

"It's a radical change for us," he says. "It meant rethinking our whole manufacturing line technology and, because we are in partnership with three vendors — Tandy, Intel and Olivetti — it meant that each of those partners had to revamp their manufacturing strategy."

The genesis of this radical new idea for Digital came right from the top, from Chairman and CEO Ken Olson. "He came to the conclusion, about a year ago, that we needed to take a new approach," Schneider explains, "combining a whole collection of the strengths that Digital has to the new shape of the PC marketplace."

Among those strengths is the fact that DEC has been selling systems and components through mail-order for more than a decade, through its Desktop Direct operation. Furthermore, DEC can offer on-site service through its own worldwide service organization, which includes not just PC service and support, but network service and support — something no other mail-order company offers. On-site service is free for one year from the time of purchase.

Although DEC's promotional literature cites "eye-popping prices," DEC's price tags are still somewhat higher than such vendors as Dell and Northgate. Acknowledging a 20-percent spread between the lowest and the highest PC mail-order prices, Schneider says DEC's target is to be "dead center."

"Our value equation at those prices is superior to that offered by any other mail-order company," Schneider responds. "We believe, in most cases, our product is better, our warranty is better, our service and support is incomparable and, by the way, shipping is part of our price," he notes.

As evidence of its deep commitment to this operation, DEC is spending \$5 million on print advertising in the first calendar quarter of 1992. DEC will also run a direct mail campaign, expecting to send out more than two million pieces of mail by the end of June.

In addition, DEC will use its direct sales force of 17,000 people to get the word out, as well as its hundreds of VARs, with a special VAR version of the Desktop Direct catalog. "We'll support the customers that our VARs and resellers generate the same way we support any customer of ours," Schneider explains.

"Our strategy is to approach the market with all the freedom, flexibility

and aggressiveness of the direct merchant, but deliver and support like Digital — a full-line, full-service vendor," Schneider says.

The Merrimack, N.H.-based Desktop Direct operation has officially been open for business since January 21, although in fact it has been up and running since December. If you're interested in getting a Desktop Direct catalog, or placing an order, call 800/PC-BY-DEC (800/722-9332).

Microsoft Lures Tom Evslin Away From Solutions, Inc.; Solutions Closes Its Doors

Microsoft Corp. has lured away Tom Evslin, former chairman and CEO of Solutions, Inc. (Williston, Vt.), to its workgroup applications business unit. Microsoft brought Evslin on-board to manage a large part of the Microsoft Mail development team and to help direct the firm's messaging and workgroup strategy.

With 20 years of experience in the field of communications software, Evslin also served as Secretary of Transportation for the State of Vermont from 1981 to 1982.

Since January 15, Evslin has been overseeing all development activities, from program management to user education, at Microsoft Workgroup Canada in Vancouver, British Columbia.

"The perfect environment for doing the next generation of mail and messaging products is a place where there are a lot of smart, driven people, applications to show how mail ought to be supported, and systems in which to include key technology," Evslin says. "That environment is Microsoft, and I'm delighted to join them."

Evslin founded Solutions, Inc. in 1970. The company developed communications software for various systems, including Tandy, IBM PCs, Apple IIs, Apple IIIs, and the Macintosh.

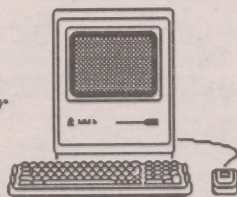
Its product line included SuperGlue II, BackFAX, FaxGate (said to be the only fax gateway for the Macintosh), and CommGATE (reportedly the only MCI Mail gateway for the Macintosh Computer).

Solutions, Inc. ceased operations on December 31, 1991. Its retail products are being acquired by other software publishers, which will assume their support.

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Short Takes

• Speaking of Microsoft, Houghton Mifflin Co. (Boston) has licensed two of its premier linguistic software products to Microsoft for inclusion in new releases of Microsoft Word. Houghton Mifflin's CorrecText Grammar Correction System and International CorrectSpell are now fully integrated in Microsoft Word for Windows version 2.0 and Microsoft Word for the Macintosh version 5.0.

• Alpha Software Corp. (Burlington, Mass.) — which has just released version 2 of its award-winning Alpha Four relational database (see page 10) — announces that the Boston Computer Society (BCS) has officially elevated the Alpha Four Special Interest Group (SIG) to User Group status. The group, which currently has 450 members, will be the first Alpha Four User Group to be established in the U.S.

"The Granite is built locally to take advantage of the talented pool of engineers and computer designers we have in our own backyard."

In operation for nearly two years under the BCS umbrella, the Alpha Four group draws between 60 and 125 people to its monthly meetings. "The formalization of the BCS Alpha Four User Group supports the emergence of a non-programming, business user niche in the relational database market," observes Richard Rabins, Alpha co-chairman.

• Computer Mart, reportedly the largest PC reseller in New Hampshire, recently introduced a DOS-based machine that's designed, engineered and assembled in New Hampshire. Each GraniteSX computer is said to be "built by hand, crafted individually, as opposed to being mass produced on an assembly line," according to company literature.

"The Granite is built locally to take advantage of the talented pool of engineers and computer designers we have in our own backyard," says Doug Weisberg, Computer Mart President. "We also see the Granite as a part of what is necessary to rebuild New Hampshire's ailing economy. Manufacturing our product locally is the key to keeping our prices down."

A 386SX with 25MHz, 2MB of RAM, an 80MB hard drive, a 3 1/2-inch floppy drive, a SuperVGA monitor with 1MB

on the video card, and a copy of DOS costs \$1,499. Quantity discounts are available for corporate customers. Computer Mart has retail stores in Nashua (603/881-4910) and Portsmouth, N.H. (603/433-8876). To keep up with demand, Computer Mart recently opened up a 5,000 square foot manufacturing facility in Manchester.

• The Information Industry Association (IIA) has given first-place honors to Individual, Inc.'s First! in its new

Product Achievement Awards. First!, a customized daily electronic newspaper produced by the Cambridge, Mass.-based firm, was chosen as the best new electronic business information product.

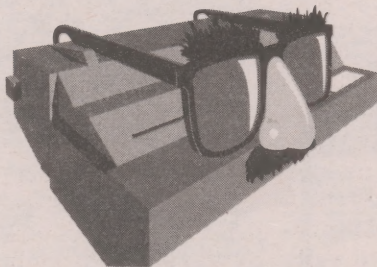
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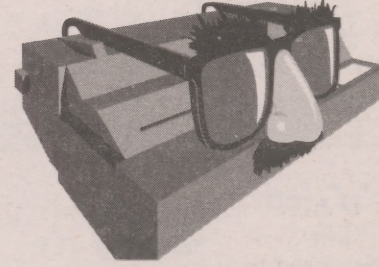
Marguerite Zientara is the author of *The History of Computing*, © CW Communications, Inc., 1981; and *Women, Technology & Power*, Amacom Books, New York, 1987.

SOME CARTRIDGES ARE GOOD AT GIVING FALSE IMPRESSIONS.



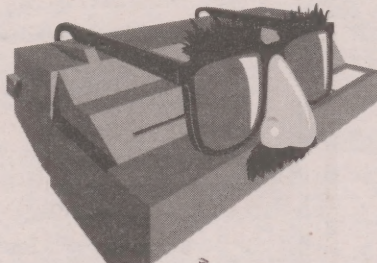
DRILL & FILL

An ill-conceived method that involves drilling holes in the toner cartridge. Contamination and failure to inspect and clean critical parts results in unhappy drill-and-fill customers.



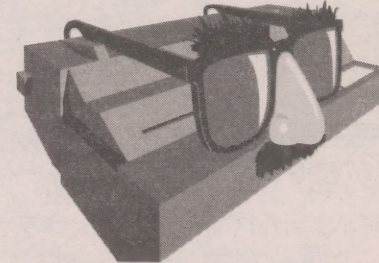
RECONDITIONERS

These cartridges get cleaned and toner is added but important parts may not be checked and replaced when necessary. Parts may wear out before the toner cartridge is empty resulting in a higher cost in materials and lost time to the customer.



REMANUFACTURERS

Worn parts may be replaced and a more effective cleaning process takes place, but in this process the customers usually get their own cartridge back. There can be a problem of contaminated toner cartridges.



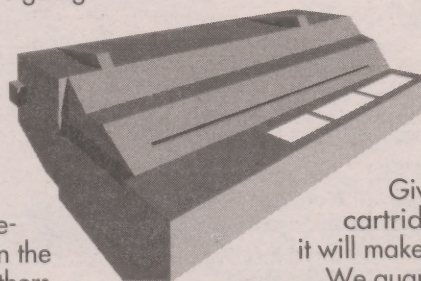
DEALERS OR WHOLESALERS

Because a dealer who shops for price might buy any or all of these methods a customer may experience a difference in print quality and consistency from one cartridge to the next.

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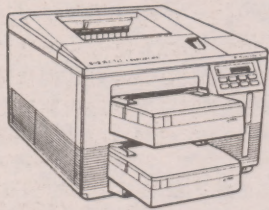


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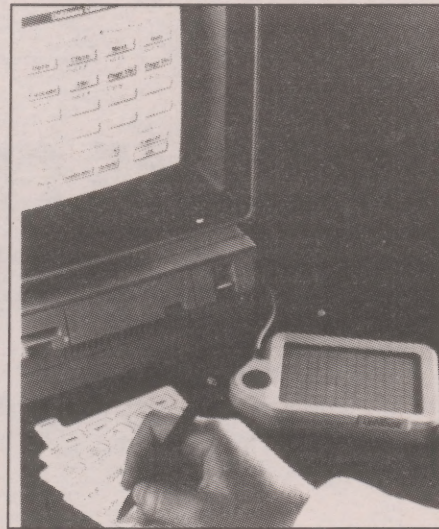
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NEWS & INDUSTRY BOSTON COMPUTER NEWS

By Marguerite Zientara

MicroTouch Offers Software Upgrade for Touch Tablet; Reduces Price to \$199



UnMouse's glass surface. To click, users press down on the glass.

With Power KeyPad, UnMouse users can execute a macro or command by touching a keypad as marked on the template inserted beneath the UnMouse glass surface. These templates eliminate the need to memorize cryptic keyboard sequences to execute commands or macros.

By replacing keyboard-driven macros with touchpad macros, the Power KeyPad eliminates the need for users to jump back and forth between the keyboard and a mouse. The UnMouse comes with preprinted templates for Microsoft Word, WordPerfect, Microsoft Excel, Lotus 1-2-3, and DOS function keys, as well as blank templates customizable by users.

As part of the new Power KeyPad enhancement, MicroTouch has reduced the price of the UnMouse by 15 percent, to \$199. The Power KeyPad software comes standard with every UnMouse, and is available as a free upgrade to all registered PC UnMouse users. MicroTouch Systems is located at 55 Jonspin Road, Wilmington, MA 01887. Telephone 508/694-9900.

MicroTouch Systems, Inc. (Wilmington, Mass.) has announced new Power KeyPad software for its PC UnMouse, the touch tablet that reportedly lets Windows and DOS users control the cursor and execute macros with a single input device.

Operating in either relative or absolute mode, UnMouse users control the cursor by moving a finger over the

MIT To Offer Technical Japanese

For computer scientists and electrical engineers who have a solid foundation in Japanese, and who would like to be able to read technical information written only in Japanese, MIT will offer an intensive summer course from June 15 through August 7.

The course will be coordinated by Dr. David O. Mills, Director of MIT's Technical Japanese Language Project, and the Department of East Asian Languages and Literatures at the University of Pittsburgh.

sity of Pittsburgh.

Tuition for the course is \$3,300, with limited financial assistance available. The deadline for applications is March 1, 1992. A proficiency exam is required of all participants.

For more information or an application, write or call the MIT Japan Program Technical Language Coordinator, Susan Sherwood, E38-762B, Cambridge, MA 02139. Telephone 617/253-8095.

VIP Software Ships Menu Shell; Offers Discount

VIP Software, Inc. (Framingham, Mass.), which announced its Cockpit menu shell to bridge the gap between DOS and Windows at the Windows & OS/2 show last August, has overcome its developmental delays and is now shipping the software.

With a click of the mouse or a keystroke, users can switch back and forth between Cockpit's Windows and DOS menus. Cockpit is said to automatically build a complete menu system, and users can customize its menu layout.

In addition, the package's user interface can be easily personalized with the format and color scheme of the user's choice, as well as user-selectable

icons, push buttons, dialog boxes, folders or text.

Cockpit's system management tools include a security module with mouse and keyboard lock, as well as screen saver and blanking, statistics module, e-mail, project control, whereabouts module, usage tracking, virus detection, and program preload.

With a regular price tag of \$129, Cockpit will cost \$89 through March 15. VIP Software will also honor special show coupons from the Windows show that lower the price to \$59.95. VIP is at One Kendall Street, Framingham, MA 01701. Telephone 508/879-9551.

Alpha Software Unveils Networkable Alpha Four; Special Price Until March 31

Alpha Software Corp. (Burlington, Mass.) has announced version 2 of its award-winning Alpha Four relational database for non-programmers. Version 2 is said to feature network support and the ability to design sophisticated database applications through a new scripting facility and enhanced application outlining capabilities.

Version 2 is Novell and NetBios compatible. Using version 2 in a networked environment requires the user to fill in one screen; file and record locking are then handled automatically. In addition, indexing speeds are reportedly

up to five times faster than in version 1.1. Version 2 is said to have more than 30 new functions.

Until March 31, users can purchase the \$549 server unit and receive a LAN two-pack for free. The retail value of the server/two-pack unit is \$1,049. Multi-user versions are available in network packs of three, five, and 30, priced at \$749, \$1,249, and \$4,995, respectively. Pricing is identical for the text-based OS/2 version.

Alpha Software is located at One North Avenue, Burlington, MA 01803. Telephone 617/229-2924.

Intex Offers Spreadsheet Add-In With Graphing Capabilities For DOS and Windows

Intex Solutions, Inc. (Needham, Mass.), a publisher and reseller of spreadsheet enhancement products, has announced what it claims is the first spreadsheet add-in to offer graphing capabilities for both DOS and Windows environments.

UltraGraphics reportedly provides Lotus 1-2-3, Quattro Pro and Excel spreadsheet users with more than 10 unique graph styles. Many of the graphs, such as XYZ scattergraphs (which relate three different factors), are not found in any of the popular spreadsheet programs available today. Other choices include contour graphs, dual X axes graphs, and 3-D bar and line graphs.

To create a graph, users select a graph

style, highlight a range of worksheet data, and view the graph. The software allows users to rotate graphs at up to 25 different angles, adjust the color and size of all graph elements, and plot up to 15 separate data ranges.

UltraGraphics comes in two versions: one for DOS that supports Lotus 1-2-3 release 2.2, 2.3, 3.1, 3.1+ and Quattro Pro; and a version for Windows that supports 1-2-3 for Windows and Excel.

UltraGraphics normally costs \$245, but an introductory price of \$220, plus \$5 shipping, will be in effect through April 30. Intex is located at 161 Highland Avenue, Needham, MA 02194. Telephone 617/449-6222.

Microsystems Software Unveils New Data Caching Technology

Microsystems Software, Inc. (Framingham, Mass.) has released its Fastload software, said to outperform traditional disk caching and RAM disks for frequently accessed programs and data.

Fastload is said to load user specified programs and/or data files into expanded or extended memory, where they remain until the system is rebooted or Fastload is unloaded. With disk caching, even such simple operations as file copying flushes data from RAM. Fastloaded files, however, are not flushed, thereby ensuring that mission critical applications and data are always instantly available in RAM.

Other advantages over traditional caching products include Fastload's 5K memory overhead, said to be about half the size of other caching products. Furthermore, since it is TSR (termi-

nate-and-stay-resident) software rather than a device driver loaded from CONFIG.SYS, Fastload can be unloaded without rebooting the PC.

In addition, the software reportedly tightly packs files one after another, eliminating the sector padding granularity RAM space that older caching systems waste. Networked PC users benefit from not having to transfer frequently accessed files from the server to each person's PC every time they are accessed.

Fastload costs \$29 per user, or \$13 per user for 100+ users, or \$2,500 for a company-wide site license. For information, call Microsystems Software at 508/879-9000 or download a limited feature demo via the firm's BBS at 508/875-8009. The company is located at 600 Worcester Road, Framingham, MA 01701.

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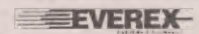


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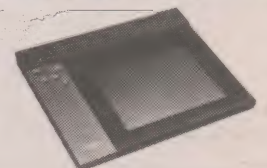
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"The Role of Networking in Globalization" will be the keynote topic at this year's NetWorld Boston trade show and conference, to be held at the Hynes Convention Center February 11-13. Delivering the keynote address (9 a.m. Tuesday, at the Marriott Copley) will be Richard D. Koeller, vice president of information technology at Whirlpool Corp. (Benton Harbor, Mich.).

Koeller — who is responsible for Whirlpool's information technology activities on a global basis — holds the top information systems (IS) position there, supervising a staff of 200 people.

"The goal of Whirlpool's IS technologies is to provide information to our customers anytime, anywhere, and in the form they require," Koeller says. "At NetWorld Boston, I will discuss the management issues surrounding the new model of a globalized business operation, and the special emphasis on networking within that model."

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Local Companies to Debut Networking Products At NetWorld '92 Boston

By Marguerite Zientara

up, the fourth annual NetWorld Boston will occupy the entire Hynes Convention Center, with some exhibits spilling over into the adjoining Sheraton Boston Hotel. The exhibits will run concurrently with a Seminar Series, featuring 81 conference sessions on a myriad of networking and connectivity issues.

The NetWorld Seminar Series will also feature nine tutorials — intensive

all-day classes on Monday, February 10. Topics will include Introduction to Local Area Networks and Topologies; LAN Disaster Planning & Recovery; and Supporting LAN Users — A Combat Guide.

NetWorld has the typically complex pricing structure of shows of this type, but basically you can buy tickets, at the door, as follows: exhibits, one day only, \$40; exhibits, two or three days, \$75;

seminars, one day only, \$225; seminars, two or three days, \$425; Monday tutorials, \$375 (exhibits free).

For more information, call show producer Bruno Blenheim, Inc. (Englewood Cliffs, N.J.) at 800/829-3976.

Local Companies To Show Off New Products

Of the more than 60 local companies exhibiting at NetWorld, nearly a third will be demonstrating new products at the show. Also noteworthy will be the Novell booths (3322, 2429, 2310), where there may well be a product making its debut. "We're trying to do something for NetWorld," a Novell spokesperson said at press time, "but it's iffy. We may or may not introduce something new."

Here is a list of definites — new and recently introduced products from New England companies that will be demonstrated at NetWorld '92 Boston:

- American Power Conversion (West Kingston, R.I.). Booth 3019. Back-UPS family of cost-effective Uninterruptible Power Sources (UPS) for LANs and other mission-critical applications, starting at \$169 for a 250-Volt-Amp unit (suitable for LAN nodes, 386SX and 286 systems).

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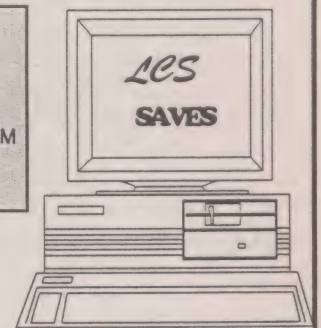
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units in its Smart-UPS series. Said to keep LANs and internetworking equipment such as hubs up and running, as well as allow network managers to communicate with the UPS in order to diagnose problems that may be linked to faulty power. Will run a Compaq SystemPro for nine minutes (600 VA) and 27 minutes, (1250 VA), respectively. Prices, \$799 and \$1,299, respectively.

Smart-UPS 900XL offers 900 VA designed to protect multiple servers or CPUs, intelligent hubs, multiple workstations, telecommunications equipment and minis. Will run a Cabletron MMAC-3 smart hub for about 4.7 hours. Also allows network managers to communicate with the UPS in order to diagnose problems that may be linked to faulty power. Price: \$1,799.

SurgeArrest line of five surge suppression products for network hardware and other critical applications. SurgeArrest for office equipment such as copiers and fax machines; SurgeArrest Plus for network nodes and interlan hardware; SurgeArrest Plus with telephone line protection for servers and data communications equipment; two wall-mount versions of Surge-Arrest Plus and SurgeArrest Plus with telephone line protection. Prices: \$29-\$99.

•Avalan Technology (Holliston, Mass.) Booth 1427. The developer of Remotely Possible/LAN, a remote control package supporting Windows, will show a new family member, Remotely

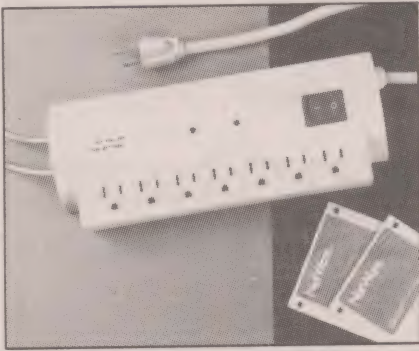
Possible/Dial. In addition to remote control, Remotely Possible/Dial is said to support file transfer between two Windows PCs, to feature interactive chat, and to allow full mouse and keyboard support. Supports serial speeds up to 57,600. Price: \$199.

•Azure Technologies, Inc. (Franklin, Mass.) Booth 4706. The recently introduced 16/4 Token-RingScope is said to complement the firm's existing line of analyzers for IBM 3270 Coax, AS/400 and 5250 Twinax. The analyzers are comprised of a PC board and software that can be used in IBM PCs or compatibles. The 16/4 Token-RingScope monitors performance and analyzes protocols on any Token Ring LAN. TheTokenRingScope adapter uses a RISC processor and 1MB of on-board RAM. The TokenRingScope costs \$2,995; the 16/4 Dual Speed Option costs \$995. Optional protocol interpreters cost \$495 each.

•Digital Equipment Corp. (Littleton, Mass.) Booth 3109. At press time, a Digital spokesperson said there was "a good chance" that the company would announce something new at the show, but details were not

available.

•FiberNet Research, Inc. (Nashua, N.H.) Booth 1308. FiberNet will introduce a full line of FDDI (Fiber Distributed Data Interface) networking products at the show: FR1100 Series AT/ISA Adapters; FR1200 Series EISA Adapters; FR1600 Series S-Bus Adapters; FR3000 Series Concentrators; and FR2000 Series FDDI-802.x Bridges. FiberNet is positioned at the high end of the FDDI spectrum, featuring a high-



The SurgeArrest surge suppressor from American Power Conversion

performance node processor and a 1MB/4MB memory design with 33MB-per-second bandwidth, reportedly offering over 30 MIPS raw power for processor-intensive applications.

•Fibronics International, Inc. (Hyannis, Mass.) Booth 4801. Fibronics will show its recently announced FX8210-B multi-

protocol FDDI router that is said to offer the best of both worlds in bridging and routing. The unit reportedly increases network efficiency, interoperability and flexibility in large heterogeneous networks. The FX8210-B integrates the routing of IP and DECnet data packets and translation bridging capabilities, transparently processing all known protocols to create a network gate-

way that connects FDDI and Ethernet LANs. Price: \$21,990 in a single Ethernet configuration.

Fibronics' K3000 Series Network Control Units are said to provide a high-speed interface between IBM-standard block multiplexer channels and industry-standard Ethernet or 802.3 LANs. The K3000 allows users to connect IBM or compatible mainframes with multi-vendor workstations, PCs and minicomputers attached to the Ethernet/802.2 network. Requires Fibronics KNET TCP/IP software installed on the mainframe.

•Funk Software (Cambridge, Mass.) Booth 5406. Funk's AppMeter allows usage metering for network applications, so that users can remain faithful to licensing agreements and avoid buying more licenses than they really need. Users can set limits on concurrent usage of any application based on the number of licenses they own. AppMeter lets users lock out additional users from an application when a specified maximum is reached, or produces exception reports when too many copies have been opened. AppMeter Features built-in virus protection.

Funk Software will also show its Proxy parallel processing software, said to let users run up to eight applications on separate PCs simultaneously, controlling them all from a single PC running Windows. Users reportedly can have one or several

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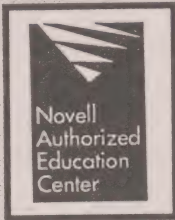
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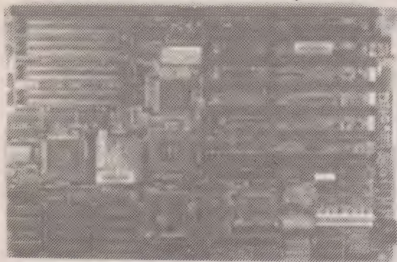
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processor-intensive applications running at full speed while they work on another. With Proxy on a network, any user can tap the power of spare or idle PCs, or provide shared access to PCs dedicated to specific tasks such as communications.

•Keyfile Corp. (Nashua, N.H.). Booth 5402. Keyfile is an integrated document manager for both paper and electronic documents running under Windows on a PC LAN. File, retrieve, share, fax, automate and distribute documents using industry-standard devices. JobMaker workflow includes automatic routing and tracking of documents and tasks. Windows-based desktop environment features "smart" icons that work with "drag and drop" mouse movements. Other features: key-word document retrieval; ability to add written, typed, and voice annotations to documents; ability to exchange data with, and control other Windows applications through, DDE and gateways to e-mail systems.

•Microcom, Inc. (Norwood, Mass.). Booth 1508. Micro-com will show two high-speed modems, including what it calls "the industry's first V.32bis portable modem." The MicroPorte 4232bis has a footprint about the size of an index card and weighs 10 ounces. The unit is said to yield throughputs up to 38,400bps on land-based lines, reducing modem connect time and offering line cost savings. The MicroPorte 4232bis supports Microcom's MNP 10 (Microcom Networking Protocol), providing enhanced data transmission reliability over both dial-up and cellular connections. Fully charged batteries provide 1 1/2 hours of connect time. Users can buy an optional 12-volt DC adapter that plugs into a standard automobile cigarette lighter. Price: \$899.

•Microwave Radio Corp. (Chelmsford, Mass.). Booth 4805. The MR-MIU Microwave Interface Unit, when combined with the proper bridge, repeater, or data router, links one Ethernet LAN with another miles apart, via the MR-23VXD Microwave System. The MR-MIU functions as a standard 802.3 network transceiver, supporting transparent transmission of multi-vendor Ethernet LANs across the microwave system at the full 10Mbps data rate. Combining the MR-23VXD and the MR-MIU, users reportedly can link Ethernet LANs up to 4 1/2 miles apart, with reliability up to 99.999%. For data paths beyond 4 1/2 miles, Microwave repeaters can be used.

•Mohawk Wire and Cable Corp. (Leominster, Mass.). Booth 1545. Mohawk will display its new line of twisted-pair Level 5 LAN cables, developed for Plenum and Nonplenum applications for data transmission at rates in excess of 20Mbps. The Mohawk Superlan II four-pair and dual four-pair mid-rip cables, which are available in both shielded and nonshielded configurations, reportedly feature low signal loss and excellent crosstalk immunity over extended distances. They

are totally compatible with standard system hardware. The Superlan II cables support Star, Ring, Bus and Tree topologies.

Mohawk will also show its Type Dual media LAN cables, designed for 16- to 100Mbps Token Ring applications, featuring a dual construction in which twisted-pair wire is married to FDDI-compliant, multimode fiber for voice and data transmission. Cables are said to satisfy requirements of performance Levels 4 and 6 and are available in dual- or tri-media configurations for custom combinations of voice, data and optics of two or four fibers. Twin PVC jackets permit wire and optics to be zipped apart while still maintaining jacket integrity.

•Montrose Products Co. (Auburn, Mass.). Booth 2913. Montrose will unveil a stranded Level 5 patch cable, 24-gauge, in 2-, 3-, and 4-pair construction.

•Netvision, Inc. (Burlington, Mass.). Booth 1403. Netvision, a network consulting firm established in 1989 by former Wang, Digital Equipment Corp. and Novell employees, will be introducing the products of New Media Technologies (Billerica, Mass.), a company that will not actually be at NetWorld. The theme of Netvision's booth will be multimedia applications on LANs. Using New Media's PC boards as the heart of its display, Netvision will demonstrate two PCs running Windows and integrating full-motion video, data and voice on the desktop. In one window of each PC, Novell NetWare will be running, communicating with a Novell file server. "There will be a very different kind of a LAN under the table that's not your typical Ethernet or Token Ring LAN, to accomplish all this," says company co-founder and network consultant Paul Dattoli.

•Star-Tek, Inc. (Northboro, Mass.). Booth 936. Star-Tek will feature its recently introduced intelligent wiring hub product line, the Focus Series. The Focus Series intelligent hub platform simultaneously supports any combination of Token Ring, 10Base-T and FDDI LAN connectivity. The Series comprises three chassis, as well as hub modules for each of the LAN interfaces supported, and network management modules. Chassis options include a 2-slot model, a 5-slot model, and a 5-slot model with redundant power supplies. The 2-slot model is designed for remote branch office applications, while the 5-slot models are intended for larger environments. Chassis prices: 2-slot chassis with power supply, \$700; 5-slot chassis with single power supply, \$1,400; 5-slot chassis with redundant power supplies, \$2,100.

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By Sam Adicoff

A View Into the Network Crystal Ball for '92

Predicting the future of the computer industry — particularly a segment as dynamic as networking — can be a dicey proposition. Unless one lunches regularly with the likes of Mr. Noorda and Mr. Gates, more resourceful methods of gathering data must be employed.

In my case, by talking to hundreds of network users and prospective users over the course of the year, I gain access to a perspective that plays a role in shaping the direction of the networking business. I also serve on advisory councils for a number of network suppliers and attend networking conferences — both sources for information (as well as rumors and innuendo) about the future.

Does this automatically make me the "prophet of 10BaseT?" Absolutely not, but hopefully some of the following predictions will land close to the mark.

Prediction: NetWare Lite will become Novell's version of IBM's PCjr.

Novell announced a peer-to-peer network to curb the growth of Artisoft's 400,000 user base and to establish a low-end growth path for NetWare. As things stand today, I don't think Novell will be successful on either count. Evaluations by computer trade publications indicate that Artisoft's LANtastic outperforms NetWare Lite... which most prospective users could live with if Novell had truly designed NetWare Lite as a starting point for NetWare client/server networks. Instead, there's no connection between NetWare Lite and the main NetWare operating system. Novell does not include any of the existing NetWare utilities

ties with NetWare Lite. Simply stated, this means the person in charge of a NetWare Lite network must throw out everything he or she learned about

peer-to-peer networking, then start from scratch when the installation of NetWare takes place. Plus, Novell doesn't offer any type of rebate when an organization moves from Lite to the full blown NetWare.

It just doesn't make sense. While Novell's sheer marketing muscle will push a few Lite networks out the door, I think support will turn out to be another negative that

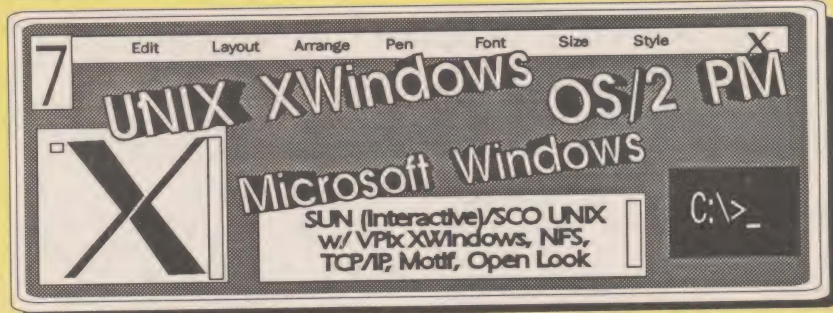
limits this product. Think about it for a moment. If Novell needs to charge thousands per year for unlimited support on a product that costs \$4,500, what type of support can an organization that pays \$90 for NetWare Lite expect? By this time next year, I suspect we will have read a few horror stories about NetWare Lite users gasping for help to no avail.

Prediction: Windows will become a standard part of LANs.

I know this sounds like a contradiction from my previous columns, but a few things have changed since then. Microsoft has announced a version of Windows specifically designed for networks that should be available this year. In short, this version will eliminate most of the pitfalls previously

SEE NEXT PAGE

The new version of Windows will eliminate most of the pitfalls previously associated with integrating Windows into a network.



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associated with integrating Windows into a network. The rise of killer applications for Windows is another factor that will hasten the migration of Windows to LANs. For example, combine the availability of WordPerfect for Windows with a survey by Computer Intelligence that showed planned applications for LANs make up 35 percent of the total planned applications for corporate information systems (IS). With word processing repre-

senting almost half of these applications, you don't need to be a mathematician to figure out that networks will keep the Windows cash register ringing.

Prediction: Some type of groupware product will reach the mainstream.

Regardless of how you define groupware, the marketplace is crying out for a way to control the flow of a document throughout an organization or department. The trouble with

groupware to this point is that it has tried to be all things to all people, which has resulted in an incredibly complex product that's not useable. By focusing on document control, the product becomes useable and solves a legitimate problem. Furthermore, I suspect we'll eventually see this type of product joining forces with image management systems. I'm not saying that the dawn of the paperless office is on the horizon, but organizations ranging from "buy low sell high" fi-

nancial planners to the Fortune 500 have reached the conclusion that something must be done to control the paper tidal wave. A hybrid product that incorporates document control with image management could be the solution. It's encouraging to see that the price of image management systems, which were in the \$200,000 range a couple of years ago, can now be had for less than \$50,000. Once the price dips below \$10,000, the cross-over will take place.

Prediction: The 486SX will become a strong contender for the network server market.

For a company known for its marketing acumen, Intel showed surprisingly little foresight in the naming of the 486SX chip. Based on the moniker scheme behind the 386 family, one logically assumes that the 486SX is nothing more than a 16-bit chip without the

E-mail makers are working on products that will actually screen and prioritize messages for the user.

full functionality of a true 32-bit 486DX chip. Wrong. The only difference between the two chips is that the 486DX has a coprocessor built into it. Best of all, most PC makers have a coprocessor socket on the system board and it just so happens that Intel's new speed chip will comfortably fit this socket. The upshot is: You can buy a 486SX-based machine running at 20MHz and later upgrade to 40MHz by merely plugging in the speed chip and obtain coprocessor functionality as well. This presents an ideal upgrade path for network servers. Needless to say, Intel has everything to gain by pushing the 486SX to prominence. After all, while AMD chips away at the 386 market, Intel still has a monopoly on the 486 arena. To capitalize on this opportunity, I've heard that Intel hired seven evangelists with the charter to spread the gospel of the 486SX. Given the technical advantages of this chip, I think it's going to make sense for many network sites to leapfrog the 386 technology and go right to a 486SX-based server.

Prediction: Mainstream personal computers will incorporate connectivity features.

PC makers are already working on machines in which an Ethernet adapter resides on the central processing unit (CPU). Given the fact that the vast

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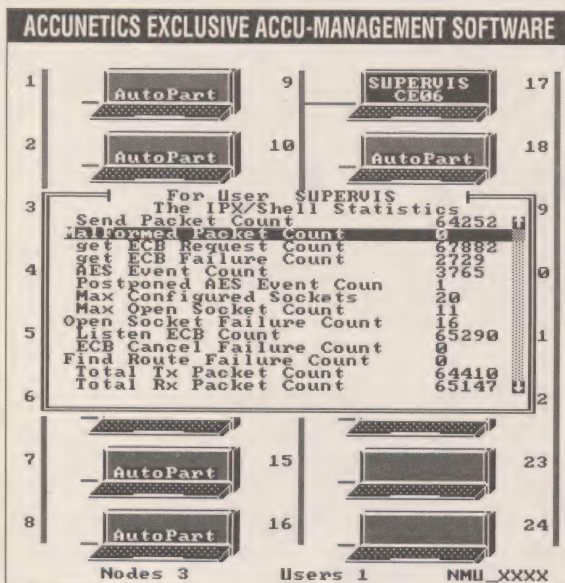
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majority of PCs eventually find their way onto a network, such a machine seems like a natural. It provides an attractive way for the buyer to lower his cost-per-node and from the PC manufacturers' standpoint, built-in network connectivity offers a way to elevate their products above commodity status. I expect this type of machine to eliminate the cost associated with network adapter cards. Given the battle among more than 70 hub vendors for a piece of the 10BaseT market, you can expect hub prices to continue to spiral downward. If market leader SynOptics must offer "blue light" specials, what does that say for the rest of the industry? At the very least, the overall cost of networks will become more attractive this year.

Prediction: Novell will not deliver SFTIII (Software Fault Tolerance) in 1992.

Novell has always espoused hardware independence, yet building fault tolerance into NetWare requires that Novell account for all the nuances that vary from PC manufacturer to PC manufacturer. For background purposes, SFTI or Hot Fix enables a piece of information written to a bad part of a disk to be automatically redirected to another portion on the disk while SFTII allows for mirrored drives so if one drive fails, the other drive kicks in. As for SFTIII, even a company as large as Novell must prioritize its technical resources which means more pressing products will likely push SFTIII down the priority chain. As an alternative, I expect the computer manufacturers to implement fault tolerance at the hardware level where it really belongs. Everex has already leaked news of a server that includes two 486 CPUs, two EISA buses coupled with an arbitrator card, two memory buses and two power supplies, and you can assume that the other PC makers aren't far behind. Why do networks even need fault tolerance? Going back to the Computer Intelligence survey, corporate IS plan to install more LAN applications than mainframe applications in the foreseeable future and one can assume that many of these applications are mission-critical. As a result, they need fault tolerance at the server level.

Prediction: Network troubleshooting tools will address the non-technical administrator.

If there's one thing holding back the masses from implementing networks, it's the difficulty in operating and troubleshooting this environment.

Today's tools, such as Sniffer, are good at gathering raw information, but you still need the equivalent of a Ph.D. in network operations to make sense of the information and take corrective actions. The next generation of troubleshooting tools will be able to analyze the information, then make recommendations to the user. In addition, these advanced tools will assist the non-technical user in optimizing his or her network by answering questions such as, "Do you need to upgrade the server processor?", "Do you need to add more RAM?", etc.

Prediction: Electronic-mail will drive the installation of networks.

This is a switch from previous years, where organizations installed networks to share central databases, then added e-mail as a supplemental benefit. Over the last two months, we've installed more networks driven by the need to communicate electronically

than over the previous two years. People have come to realize that an organization or department can realize tangible productivity gains by just improving internal communications. The advancements in e-mail software have also had something to do with companies jumping on this bandwagon. I also think the advent of "intelligent" e-mail will transpire in '92. In a sense, e-

mail has been a victim of its own success. As its popularity has grown, some users have become inundated with messages... but e-mail makers are working on products that will actually screen and prioritize messages for the user. For example, if I was working on a critical project code-named "albatross," my e-mail could move all e-mail messages that contained the word "albatross" to a top priority status. And if I had to fly to Phoenix on business, my e-mail could not only prioritize all messages related to the "albatross" project, but also automatically fax them to my hotel.

As I complete my look into the networking crystal ball, I'm reminded of a computer executive who was asked about the future of the PC marketplace and replied, "That's like Mrs. Magellan asking how many lunches should be packed for the boys."

Like Magellan and his crew, we continue to push into uncharted waters.

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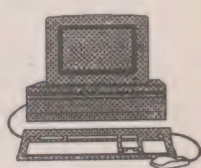
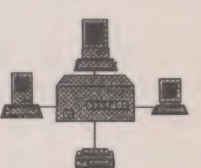
Sam Adicoff is president of PC Edge, a San Jose, Calif.-based company that specializes in computer networks.

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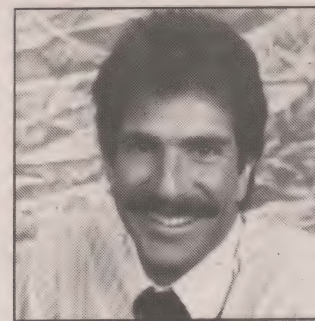
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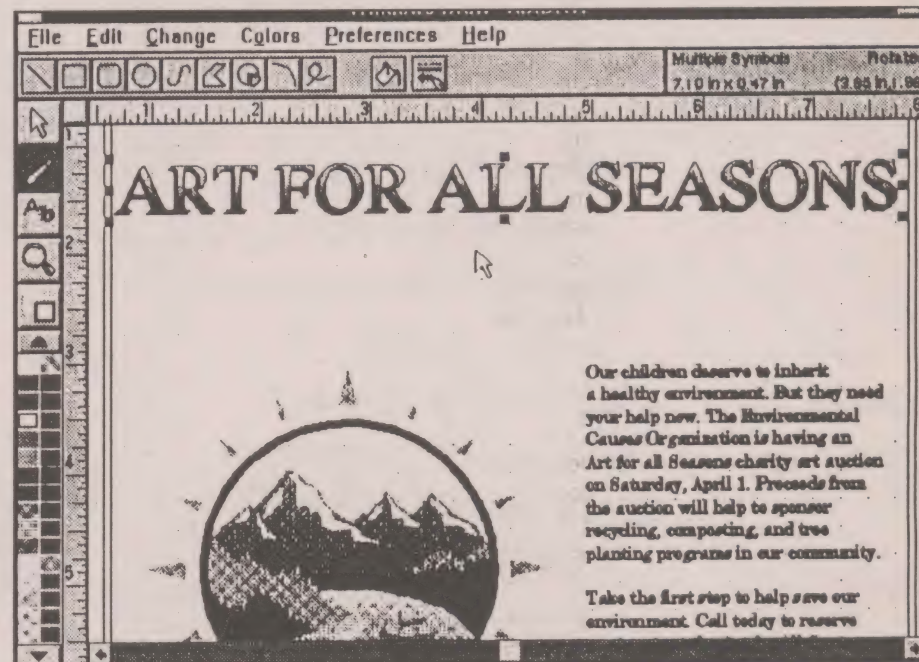
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By Rick Altman

Windows Draw: The Oldest Rookie Makes its Debut... Again



Micrografx' \$149 Windows Draw includes features such as text around a curve, grouping and ungrouping of objects, full color editing, and bitmap and gradient fills (as seen in the headline above).

It seems strange and ironic to hail the introduction of Micrografx's new drawing program, Windows Draw. After all, Draw was out there producing circles, squares, and text characters while the rest of us were snickering at anything that had to do with Microsoft Windows, wishing the pathetic graphical thing would just go away.

As Windows grew up, so did drawing programs. Computer Support Corporation introduced Arts & Letters, Corel Systems ushered in its award-winning CorelDRAW, and Micrografx retired Draw in favor of the more robust and technically-inclined Designer. And so it stood for almost three years.

Call it an idea filling a need, a lucky marketing stab in the dark, or perhaps even a desperate attempt to gain ground on Corel; whichever, Micrografx has dusted off Windows Draw and returned it to the playing field, and the timing couldn't be more opportune. With runaway hardware upgrades driving bigger and more complex applications, it's nice to see a developer scale a program down rather than up. Windows Draw does 90 percent of what the big boys do, and for far fewer dollars, 149 of them to be precise. Don't be at all surprised to see

the others follow suit with Draw Lite-type programs that taste great and are less filling.

In virtually all respects, Windows Draw lives up to its marketing hype of "fun, fast, and friendly." In stark contrast to the somewhat overburdened interface that characterizes Designer, Draw is exceptionally inviting, requiring little more than general Windows skills to navigate. I figured that a good test for a program that claims to be

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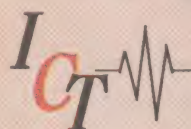
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user-friendly is to see how far I could get without invoking help or referring to the manual. I reached for the book only once, to get help on gradient fills. A warning to all book publishers: Think twice before publishing books on a program like Windows Draw that's so easy to use.

While Draw doesn't warrant too many negative statements, it's easier to describe the program in terms of what it doesn't offer than what it does. With respect to the standard suite of features in the Big Three, Draw gives ground in the following areas:

- No auto-trace
- Limited color palettes
- No color separation capability
- No warping and perspective controls
- No layering facility like the one made famous by Designer
- No font creation and export like that offered by Corel's WFNBoss.

Draw does just about everything else that the Big Three offer, including text around a curve, bitmap and gradient fills, grouping and ungrouping of objects, full color editing, and all the other features that have become standard in professional drawing and illustration. If you don't need the features listed above, perhaps you're paying about \$350 too much for your drawing program.

A Capable Windows Partner

Windows Draw proved to be a sympathetic partner to every program I threw at it, including page layout, spreadsheet, and word processing applications. Its Clipboard support is clean and accurate, as are its export filters for creating CGM, EPS, GEM, HPGL, PCX, TIF, and WMF files. This bodes well, not only for its own sake, but for a future release of Designer, which has been troubled in the past by inaccurate Clipboard and export filters.

Draw also shines in accepting images from other sources. It willingly digested complex bezier curves from Corel, accepted 24-bit images from various paint programs, and placed text from the Clipboard and from a text file. Speaking of text, while Draw comes with 18 outline typefaces, the real news is its ability to work with whatever outline font manager you use with Windows. Its smooth operation with Adobe Type Manager opens the door for you to use any Type 1 font you have, including those you might create from font generation programs. With the help of ATM, all fonts display and print accurately from Draw.

Draw also has an impressive 2,600-piece collection of clip art that is built into the program. The clip art catalog is

bidirectional: You can browse, preview, and then select clip art images to incorporate into your current drawing, and you can take a drawing and add it to the clip art catalog. Indeed, Corel and Computer Support might want to take notes on Micrografx's intelligent implementation of Draw's internal clip art library.

It's difficult to find fault with Windows Draw, largely because Micrografx didn't try to make it the ultimate in drawing programs. It would be nice to have CMYK color

matching, and a few more keyboard shortcuts would be welcome. Also, the Undo has only one level and isn't very smart about what it will and will not undo. Still, it's much easier to be forgiving of a \$149 program that isn't claiming to be all things to all users.

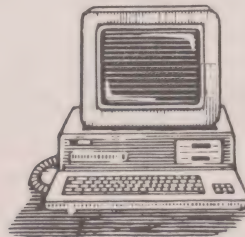
Micrografx won't care terribly much if Windows Draw takes from the user base of Designer, but Corel and Computer Support won't be nearly as thrilled to lose sales to this old-and-new-again program. With Adobe's Type Align — an inexpensive type creation program

— and Bitstream's MakeUp ready to leave the starting gate, we might be witness to a new class of software. And I wouldn't be surprised if this niche fills up quickly. After all, if I could make do without the high-end features, I'd be a fool to spend \$495 or more when there is such an attractive alternative in Windows Draw.

Yes, it's likely that Micrografx will have lots of competition in the Lite Draw software category, but until then, it has the place to itself, and its product is a winner.

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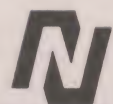
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Rick Altman has authored books on Ventura Publisher, PageMaker, CorelDRAW, Harvard Graphics, and DESQview. He consults and lectures on corporate publishing. You can write to him at 20204 Merritt Drive, Cupertino, CA, 95014, or on CompuServe (72341,1714).



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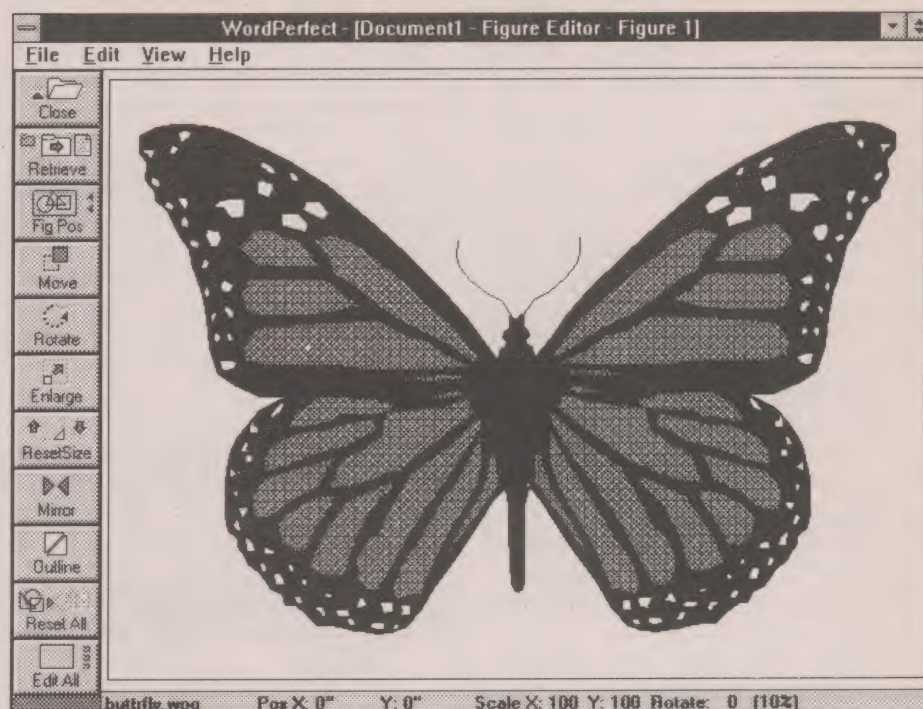
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WINDOWS FEATURE



WordPerfect for Windows includes editable button bars (left) that users can configure to fit their needs.

WordPerfect For Windows

Crow Never Tasted So Sweet

By Rick Altman

WordPerfect for Windows is due out soon, and I'm not particularly looking forward to it, because I'm afraid that it's going to be more of the same overblown Windows programming... a dizzying airlift of features stuffed into one program. This is to any manufacturer of a Windows-based word processor: Show me a word processor that remembers its roots. Show me one that would appeal to the writer and not the publisher. Show me one that is fast and flexible and that doesn't cost a fortune.

"Until then, it's back to my character-based word processor, where I will continue to compose my thoughts and not hold my breath."

—Rick Altman, *Computer Currents*, August 1991

I did not expect to be composing an article with a Windows-based word processor so soon, and I surely didn't expect it to be one of those over-stuffed programs about which I wrote so disparagingly last summer. WordPerfect for Windows, however, has made me eat crow. Big time.

I've read widespread reports about its problems. That it violates Windows protocol, that it's a kludge, that many of the features that Windows users expect are implemented strangely. I can respond to that in two words: Who cares? WordPerfect does many things intelligently, irrespective of whether it's considered good Windows form. Most importantly, WordPerfect for Windows is a product that a writer/editor/typist can really use. The es-

sential writing and editing tools can be made accessible, and all of the irrelevant junk can be hidden.

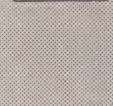
Good Keyboard Access

Most writers and editors will tell you that they would just as soon jettison the mouse when they are composing or editing. The mouse is for page design; keyboards are for typing. I'm happy to report that WordPerfect's keyboard access is virtually complete. Entire writing sessions go by without my ever reaching for the mouse. Line, paragraph, page, and document controls provide complete keyboard access — as does the often treacherous navigation through file and directory windows — and all keystrokes are clearly marked. The only time I use the



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mouse with WordPerfect is when I open a second window and intend to change its size.

Display Flexibility

WordPerfect doesn't provide all of the convenient viewing modes that Word for Windows 2.0 does, and if I were producing a newsletter or a brochure, I'd probably long for the ability to zoom in and out. But when using it as a writing tool, I could hardly care less about viewing the document at 50 percent, 75, 100, 200, or a custom percentage of my own choosing. What appeals to me is that I can see any typeface in graphical mode, get fast scrolling in draft mode, and have access to hidden codes, just like in previous versions.

I especially appreciate how clean I

Why is the printing so good with WordPerfect for Windows? Simple — you can remove Windows from the formula.

can make the screen. I can turn off the fancy Button Bar, ditch the rulers, and lose the scroll bars.

Keyboard Redefinition

In keeping with my preference to use the keyboard over the mouse, I would sooner add a command to the menus or to a keystroke than add buttons to the new Button Bar. Fortunately for me, WordPerfect offers direct access to keystroke definitions through an easy-to-reach dialog box. There are three tried-and-true WordStar commands that I must have — Ctrl-Y to delete a line, Ctrl-T to delete a word, and Ctrl-F to move one word to the left. It's easy to assign these and other commands and functions to keystrokes, and simple to assign macros to the menu. Equally important, WordPerfect stores these definitions so that they are always accessible across the board. They are not stored in "document templates," as they are in Word and other programs. I don't have to worry about whether my macros or special menu items are available with a particular document — they're always there.

Superior Printing

Why is the printing so good with WordPerfect for Windows? Simple — you can remove Windows from the formula. In addition to the standard choices of available printers that all Windows applications have, WordPerfect can bypass the Windows printer drivers altogether and use a conventional WordPerfect printer driver or the one you've written.

"Total Compatibility"

Printer drivers are not the only things WordPerfect shares among its two DOS-based versions. It also shares file formats. It is misleading to say that WordPerfect for Windows is "compatible" with the DOS-based 5.1, and it is incorrect to say that WordPerfect for Windows "interprets" files created in DOS-based 5.1. In fact, the two programs speak the exact same language. WordPerfect for Windows writes files exactly the same way that previous

versions do — there is no interpreting or converting at all.

As a result, WordPerfect might have carved out the largest migration path to Windows that the industry has seen yet. Companies won't have to move to Windows en masse; individual WordPerfect users can decide for themselves, secure in the knowledge that they can share files with those who have not made the switch. Word for Windows offers pretty good filters for passing files out to Word for DOS, but

they are only as good as filters can be — the two programs speak different languages, and that is a significant issue for companies managing documents with complex coding or formatting. That issue is completely moot with the two 5.1 versions of WordPerfect.

Simplicity of Operation

Many reviewers have attacked WordPerfect for its less-than-robust

SEE NEXT PAGE

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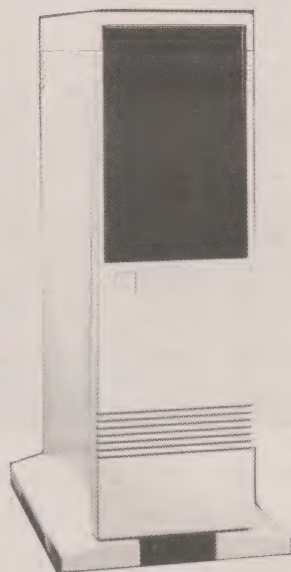
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FROM PREVIOUS PAGE

formatting capabilities; I revel in the void. For instance, WordPerfect lacks the sophisticated style sheet approach that Word takes to document creation, and as such, it can't assign formatting styles to individual paragraphs. This won't score any points with desktop publishers using WordPerfect, but it's a refreshing change for those who just want to process text and change a font or two here and there. In WordPerfect, I can change the face of an entire docu-

ment just by moving to the beginning, pressing F9, and picking a new face. I don't have to worry about global consequences, or attached styles, or any of the factors that amount to a pile of nonsense for writers and editors.

Those are the features you can enjoy with WordPerfect for Windows. Here are the ones you will have to endure:

Lousy Undo

Only one level of undo, and it doesn't include text formatting. If you make a

phrase bold and then change your mind, Edit/Undo won't help. You'll have to "un-bold" the phrase, or toggle on Reveal Codes and manually delete the bold code. There is a separate Undelete command that requires the awkward keystroke of Alt-Shift-Bksp and then passage through a confirmation box.

Different Macro Language

This isn't necessarily a drawback, but an important point to note. If you

switch to WordPerfect for Windows, your files will all make the trip no problem, but your macros might not. As with most other Windows-based macro languages, this one is function-driven, not keystroke-driven. That is to say, it records not the keystrokes that produce the event, but rather the event itself. I had to part with the macro I wrote that invokes the "Save as DOS Text" command and waits for me to furnish a filename.

Speed

Forget about the lightning-fast screen scrolling you have in DOS-based 5.0 and 5.1. Even in draft mode, WordPerfect for Windows is a distant second to its non-graphical cousin. On my 386/33, I don't feel like the slower scrolling burdens me. However, my wife Becky has retreated back to the

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**While some find
it to be cold,
stark,
underpowered, or
un-Windowslike, I
find it to be
clean,
approachable,
and unburdened.**

comfortable confines of DOS-based 5.1 on her 386/25, citing screen response and an unwillingness to convert many of her more complex macros. Suffice it to say I still await a Windows-based word processor that makes speed a priority over DTP-oriented features.

In general, my delight with WordPerfect for Windows coincides precisely with other reviewers' disdain for it. While some find it to be cold, stark, underpowered, or un-Windowslike, I find it to be clean, approachable, and unburdened. It scores points in my book for its keyboard friendliness and a general willingness to stay the heck out of my way as I go about the business of processing words. I like that.

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Rick Altman consults and lectures on corporate publishing. Write him at 20204 Merritt Drive, Cupertino, CA, 95014, or on CompuServe (72341,1714).

Product Info

WordPerfect for Windows, \$495
WordPerfect Corporation
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- ☐ 6 Business Manager
- ☐ 7 Project Manager Chief/Group Leader
- ☐ 8 Prod./Merch. Manager
- ☐ 9 Manager/Supervisor not listed above
- ☐ 0 Data Base Administrator
- ☐ 1 Other Administrator
- ☐ 2 Physician
- ☐ 3 Accountant
- ☐ 4 Attorney
- ☐ 5 Consultant/Advisor
- ☐ 6 Bus. Microcomputer Specialist
- ☐ 7 Systems Analyst
- ☐ 8 Writer
- ☐ 9 Coordinator
- ☐ 0 Programmer
- ☐ 1 Engineer
- ☐ 2 Educator
- ☐ 3 Representative
- ☐ 4 Other (please specify) _____

24 Primary business activity of your firm (check one only)

- ☐ 01 Manufacturing of computer equipment, computers, DP hardware, peripherals
- ☐ 02 Software development
- ☐ 03 Manufacturing other
- ☐ 04 Agriculture, mining, construction
- ☐ 05 Transportation
- ☐ 06 Communications
- ☐ 07 Utilities
- ☐ 08 Computer related retailer
- ☐ 09 Non-computer related retailer
- ☐ 10 Finance, banking, insurance
- ☐ 11 Real estate
- ☐ 12 Health, medical service
- ☐ 13 Legal
- ☐ 14 Education
- ☐ 15 Data processing, computer service
- ☐ 16 Government

- ☐ 17 Consultant
- ☐ 18 Wholesale/Distributor
- ☐ 19 Research/Development
- ☐ 20 Engineering/Architecture
- ☐ 21 Other business services
- ☐ 22 Advertising
- ☐ 23 Sales/Marketing
- ☐ 24 Personnel Placement
- ☐ 25 Entertainment
- ☐ 26 Other (please specify) _____

25 Company Size (check one only)

- A ☐ Under 10 employees
- B ☐ 10-24
- C ☐ 25-99
- D ☐ 100-249
- E ☐ 250-999
- F ☐ 1000-2499
- G ☐ 2500-4999
- H ☐ Over 5000

26 Department (check one only)

- ☐ 01 Accounting
- ☐ 02 Administration Management
- ☐ 03 Communications
- ☐ 04 Consulting
- ☐ 05 EDP/MIS
- ☐ 06 Education/Training
- ☐ 07 Engineering
- ☐ 08 Finance
- ☐ 09 Marketing
- ☐ 10 Operations
- ☐ 11 Personnel
- ☐ 12 Production/Plant
- ☐ 13 Purchasing
- ☐ 14 Research & Development
- ☐ 15 Sales
- ☐ 16 Other (please specify) _____

Does your firm have personal computers?

- ☐ Yes: If yes, please indicate quantities below. Complete both columns.
- ☐ No

34 Number currently owned:

- A _____ PC (286) Compatible
- B _____ PC (386) Compatible
- C _____ PC (486) Compatible
- D _____ Notebook PC

35 Number plan to purchase within next 12 months:

- A _____
- B _____
- C _____
- D _____

- E _____ Macintosh Classic, or SE
- F _____ Macintosh LC
- G _____ Macintosh IIcx, IIsi, IIfx
- H _____ Macintosh IIcx
- I _____ Macintosh Powerbook
- J _____ Amiga
- K _____ NeXT Workstation
- L _____ Sun SPARC system
- M _____ Other (Please Specify) _____

30 Please estimate your department's budget for computer hardware, software and supplies for the next 12 months:

- A ☐ Over \$500,000
- B ☐ 250,000 to 499,999
- C ☐ 100,000 to 249,999
- D ☐ 50,000 to 99,999
- E ☐ 25,000 to 49,999
- F ☐ 10,000 to 24,999
- G ☐ Under 10,000

31 Through what channels will your department purchase its hardware software and supplies? (Check as many as apply)

- A ☐ Computer Retail Store
- B ☐ Distributor/Wholesaler
- C ☐ Value Added Reseller
- D ☐ Consultant

- E ☐ Mail Order
- F ☐ Manufacturer
- G ☐ Other _____

In which of the following ways are you yourself involved with personal computers, accessories and supplies?

- ☐ Use them
- ☐ Recommend them
- ☐ Establish specifications
- ☐ Approve purchase
- ☐ Acquire them
- ☐ Evaluate or select suppliers
- ☐ Train people to use
- ☐ Sell them
- ☐ Develop or manufacture
- ☐ No involvement
- ☐ Other involvement (please specify) _____

32 For how many personal computers or microcomputer systems do you have this involvement? (Check one only.)

- A ☐ 1-3
- B ☐ 4-9
- C ☐ 10-24
- D ☐ 25-49
- E ☐ 50-99
- F ☐ 100 or more

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Interviewed by Marguerite Zientara

"Our whole secret to success is that we have about 1,700 square feet dedicated to the service area."

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Location:	295 University Avenue, Westwood, MA 02090
Telephone:	617/461-1160 or 800/242-4DPI (800/242-4374)
Hours:	8-5:30, Mon.-Fri.
Type of Sales:	Direct corporate sales and storefront
Year Started:	1984
Salespeople:	5, under the direction of Steve Bell, VP of marketing.
Hardware:	NEC computers and peripherals, including large-screen monitors, fax machines, printers. DPI store-brand PCs (made by Diamond Flower), including laptops. AOC monitor line, from 12-inch monochrome to SuperVGA. Advanced Matrix Technology (AMT) multiple-part form printer with plotting and color capabilities.
Software:	Novell, LANtastic, WordPerfect, Microsoft Word, DOS, dBase.
Specialties:	Networking, desktop publishing, multimedia.
Training:	On-site and in-store training. Two trainers on staff.
Warranties:	One-year warranty on everything sold.
Service & Support:	Nearly 2,000-square-foot service area, four technicians under the direction of Carl Abramson, VP of support. \$100,000 in NEC parts in stock. Dataware was one of the first NEC Authorized Service Centers in the U.S. Services NEC customers nationwide.



William Cunningham,
president of Dataware Products, Inc.

William Cunningham has been in the computer business for 32 years, having joined Burroughs Corp. (now Unisys) in 1960 and working there until 1984, when he started Dataware Products, Inc. (DPI). His long experience with one of the early corporate giants of the computer industry has deeply influenced the way he runs his business today.

"We're Old School, the way things used to be," Cunningham says. "We're not big here on telemarketing. We're not sitting here calling people on the phone, asking, 'What are you using? I can sell it to you for \$5 less.' We're out calling on people saying, 'We think we have a very good line of equipment, and we think we can save you some money. Can we take a look at what you're doing and make some recommendations?'"

What would you say differentiates Dataware from the competition?

Service and support. We support and service everything that we sell. We listen to what the customer is saying and then we're responsive to them. We sell the customer the right thing, and

then we support the customer and the products.

Our whole secret to success is that we have about 1,700 square feet dedicated to the service area here. People come here or ship equipment in by UPS, we turn the systems or peripherals around in a day.

We have well trained, well qualified technicians. If someone brings in a unit with a hard drive problem, we do our best to recover the data before reformatting or replacing the drive.

Anybody can say service and support is what makes them different. But, here's an example — I had a guy in here yesterday, he bought an NEC monitor someplace else. It didn't work when he opened it up. The place where he bought it said, "What are we going

to do about it?" Now, we are an NEC Authorized Service Center. The guy brought it down here, and we gave him a brand new one.

Now we'll do the paperwork to get a replacement from NEC. I've made the investment to have the replacement ones here for these people who come in. That's what makes us different.

What would you say is your biggest challenge as a retailer?

There are two challenges. The biggest one, that's always there for a small company like ours, is money. Everybody is fearful, the banks are fearful, the major companies have been burnt by a lot of people going into Chapter 11, so they're very leery of what they want to lend you, for credit terms. But we have to get the products in, get them set up, get them delivered. We have to give some terms to people, and then we've got to collect the money from those people. So cash flow is always a problem.

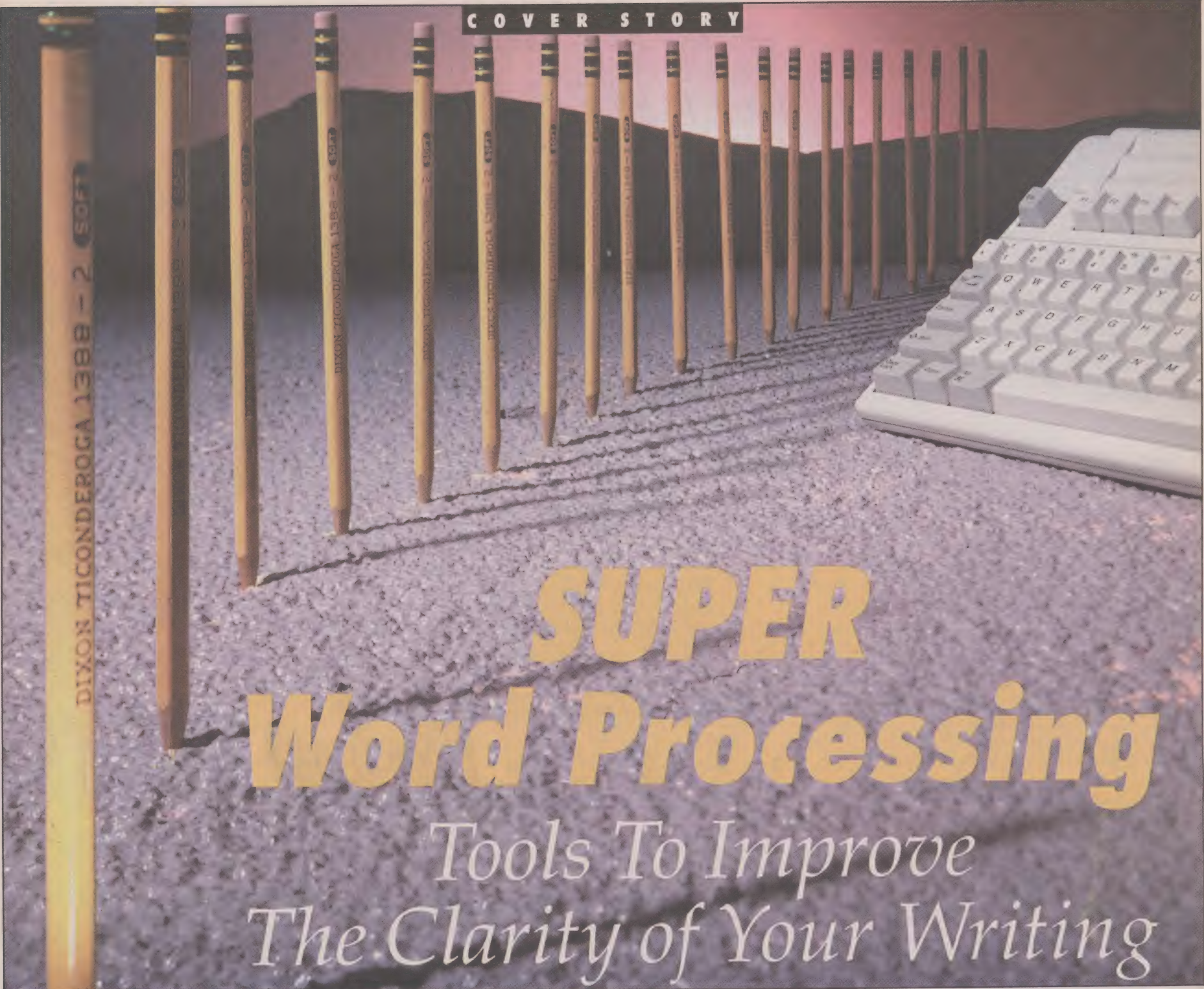
The other thing is the future of the business. I believe that IBM will be out

of — that's O-U-T — out of the personal computer business in two years. They can't make any money in it. They got out of the software business after making a major investment in it. They will be out of the printer business this year and PCs by 1993. There's no money for them to make the margins they need to make in PCs. They're up against the clones — against what we put out there (our DPI clone), against the Dells, and the ALRs, and those are good clones out there.

So it's scary, but it's an opportunity, because all these big companies that don't buy anything but Big Blue, because they think they're making a safe choice, will be faced with making another choice.

What is selling the best for you right now on the hardware side?

I would say people moving to the 386 is our best area right now. And more people are going into networking, so we're doing a fair number of 486 servers.



SUPER Word Processing

Tools To Improve The Clarity of Your Writing

By Lawrence J. Magid

The software industry has gone to great lengths to help users improve the appearance of their documents. Desktop publishing, word processing and even spreadsheet and database software now offer tools to dress up your documents. However, the real strength of a document comes not from how it looks, but from what says. Hopefully, people judge you by what you say as well as how the words look on the page.

Just about all word processing programs now come with a built-in spelling checker and many have a thesaurus. Beyond those tools, grammar checkers are the most popular category of writing tools, led by Grammatik from Reference Software, Correct Grammar from WordStar's Writing Tools Group and PowerEdit from Artificial Linguistics. Other available tools include dictionaries that provide you

with the words' meanings as well as the spelling and style guides that provide advice about the use of words and language.

Grammar Checkers

Grammar checking programs purportedly help you improve the clarity and precision of your written communications. They're designed to help just

about anyone avoid embarrassing errors, assist professional writers in their proofreading and provide critical advice and assistance to the occasional writer who may not be up on the all the rules of grammar and style.

Trouble is, all grammar checkers have a fundamental flaw. The English language is imperfect and inconsistent. What's more, good writing is more of an art than a science. The rules aren't always consistent and not everyone can agree on all rules. Grammar checkers, like any software that tries to mimic human intelligence, can only make a best guess as to what is right or wrong. In most cases, such programs err on the side of conservatism. They'll mark a sentence as questionable even though the writer may have good reason for what is there. Worse, even the best grammar checkers sometimes fail to catch errors.

Nevertheless, grammar checkers can be very useful as a general screening tool. They can also serve as a training tool. Using a grammar checker can help you become a better writer, especially if you are willing to learn from your mistakes.

Modifiable Rules

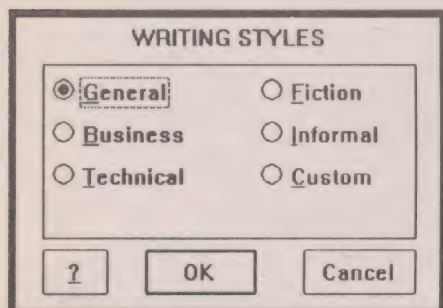
Fortunately, all the popular grammar checkers have a set of rules that can be modified by the user. For example, if you don't want to be nagged about using the passive voice, you can tell the software to ignore those alleged errors. The leading programs also allow you to define your style of writing. Business correspondence isn't scrutinized as closely as technical writing. Users who select casual or informal styles get even more breaks.

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For that reason, they can be used as a company's stylistic enforcement tool. A company can determine its acceptable styles, program that into a grammar checker and require employees to use that checker before documents go out the door.

Finally, you can always ignore the program's suggestions if you don't like its advice. That's more than I can say about my human editors.



Reference Software's \$99 Grammatik grammar checker features a Writing Styles dialog box, which lets the user tailor Grammatik's proofreading to a specific writing style, ranging from "technical" to "informal."

Grammatik

Grammatik, from Reference Software, is the oldest of the current crop of grammar checking products. First created in 1981, Grammatik helped forge the genre. Its latest versions for the Mac, Windows and DOS have been enhanced to include style checking and word usage along with grammar and punctuation.

All versions of the program are designed to work with documents created by your word processing software. All three versions are also designed to run simultaneously with your word processor. The DOS ver-

Grammar checkers, like any software that tries to mimic human intelligence, can only make a best guess as to what is right or wrong.

sion is a TSR, or memory resident, program.

The program has several modes, represented by menus. The writing styles menu allows users to adjust the program's rules for six different writing styles. Styles include general (the default), business, technical, fiction and informal. You can also specify a "cus-

tom" writing style where you select your own rules from the program's rules editor.

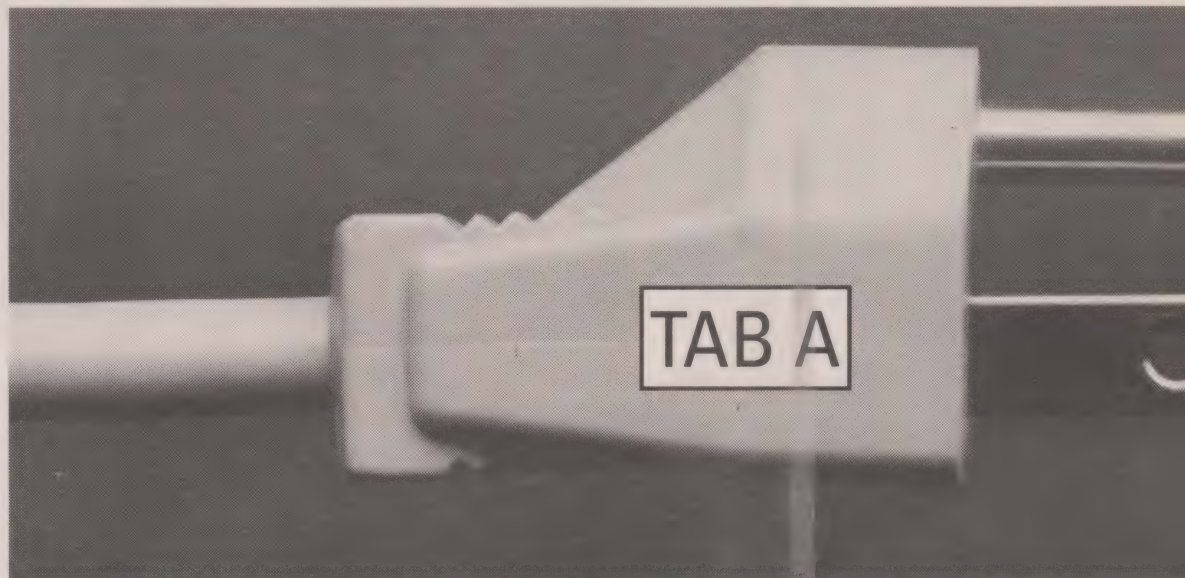
Grammatik 2.0 supports 30 word processors as well as ASCII text files. The program displays the questionable text in one window and an explanation of the problem in another. When the program locates an error, it gives you an opportunity to make the correction, mark it for later correction,

ignore the phrase, move on to the next problem or ignore the entire class of problems.

PowerEdit

PowerEdit, from Artificial Linguistics of Dallas, Texas, was recognized by both *PC Magazine* and *PC Week* as the most accurate and powerful of the grammar checking programs. It's also

the most expensive in terms of cost (\$295 list) and disk space (10 to 12 megabytes). It's the only program to effectively help with the writer's ambiguity and tone along with the other rules of grammar. It helps with word choice, sentence construction and length, and examines slang, acronyms and foreign words. The program displays two windows — one with your text and another with error messages.



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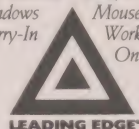
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A tutorial is available while using the program. The program directly supports files from WordPerfect and Microsoft Word as well as ASCII files generated by any word processing program.

Correct Grammar

Correct Grammar, from WordStar's Writing Tools Group, is an increas-

ingly popular choice for DOS, Windows and Mac users. The company is now on version 3 for DOS and Windows and version 2 for Mac but has just announced new versions for each platform. The product is based on the grammar checking code, called an "engine," from Houghton-Mifflin. It's the same engine used in some other grammar checkers, including the one built into Word for Windows. However, the

actual implementation of the grammar checking varies from program to program so even though it shares some underlying code with other grammar checkers, the user interface can vary.

Like most grammar checkers, Correct Grammar also handles spell checking with a whopping 135,000-word dictionary.

Like Grammatik, the software allows you to tailor the program for the

way you like to write. You can turn off rules to make the program more forgiving. You can make these decisions on your own — on a rule-by-rule basis — or use one of the program's ten pre-programmed styles. Styles include academic, advertising, business, custom, fiction, general, informal, legal, reviewer and technical. Some of the styles, like advertising, fiction and informal, are quite relaxed while others, such as academic and reviewer, are strict. The custom style starts out strict but can be modified.

The Windows version of Correct Grammar works with all Windows word processing programs and allows you to check an entire document or the portion that is highlighted. You can even install Correct Grammar as an option on the Word for Windows and Ami Pro menus (same is also true with

PowerEdit is the only program to help with the writer's ambiguity and tone.

Grammatik for Windows). However, the current version of Correct Grammar (3.0) does not work with Word for Windows 2.0 files. You can still use it with that program but must check grammar from within the Windows clipboard or save your files in another format. The recently announced Windows version will offer special support for WordPerfect for Windows, including the ability to check selected text or a single paragraph.

Word for Windows

Spell checkers were once sold as separate programs, but they're now built into virtually every word processing program. The same is true with thesauruses. Microsoft is continuing the trend with grammar checking. Word for Windows 2.0 comes with a built-in grammar checking feature. As with Correct Grammar, the grammar checker in Word for Windows is based on a software "engine" from Houghton-Mifflin. However, the program is not as powerful as Correct Grammar or Grammatik. Nevertheless, the grammar checker is well integrated into the program, easy to use and adequate for most purposes. In addition to providing normal proofing, it provides a full set of document statistics.

Statistics

All of the grammar checkers provide summary statistics — a grading system for your documents. The specific statistics vary by program but most offer the Flesch Reading Ease,

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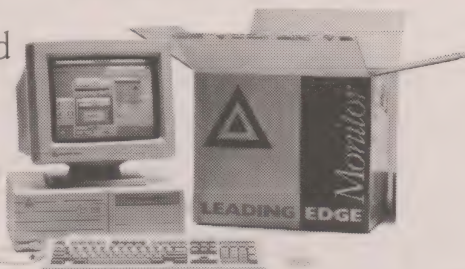
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Flesch-Kincaid Grade Level and the Gunning Fog indexes. These general indexes, all based on sets of rules created long before people began using computers to write, analyze word patterns to provide some general information on readability. Like other aspects of grammar checking, they are not infallible.

The Flesch Reading Ease gives you a score of 0-100; the lower the number, the more difficult the writing is to understand. It's based on a formula that considers the average sentence length and the number of syllables per 100 words. A similar formula calculates the Flesch-Kincaid Grade Level. That number returns the average grade level necessary to understand the material. The higher the grade level, the more difficult it is to understand.

The Gunning Fog index uses yet another formula based on average number of words per sentence and number of words of three syllables or more. It, too, is an approximate index of the grade level necessary to easily understand the material.

Using both Correct Grammar and the Word for Windows grammar checker, I ran statistics on the three (admittedly technical) preceding paragraphs. The two programs gave close but slightly different results on all but the Gunning Fog index. Both programs showed a Flesch Reading Ease of about 43 (considered fairly difficult), and a Flesch-Kincaid Grade Level of 13 (Correct Grammar) and 13.8 (Word for Windows). Word for Windows gave me a Gunning Fog Index of 14.7 but Correct Grammar scored it as an 8.4. Now I know why they call it a "fog" index.

As a point of comparison, I ran the same tests on the following rhyme: "Mary had a little lamb. Its fleece was white as snow. Everywhere that Mary went, the lamb was sure to go." Word for Windows gave it a Flesch Reading Ease of 83.8 (considered easy) but a Flesch-Kincaid Grade Level of 6.3. I doubt that one has to complete the 6th grade to understand the rhyme. Correct Grammar was more generous. It gave it a Flesch Reading Ease score of 95.8 (very easy), but suggested a 4th grade reading level.

Dictionaries and Glossaries

Houghton-Mifflin, the company that developed the grammar engine, also developed the American Heritage Electronic Dictionary. The program is currently distributed by the Writing Tools Group of Sausalito, Calif. The program's thesaurus contains 500,000 synonyms for 42,000 words and its dictionary contains 116,000 definitions. The program works as a desk accessory on the Macintosh and as a terminate-and-stay-resident (TSR) program under MS-DOS. A Windows version will be out soon. (On page 32 of this issue, Bernie Zilbergeld reviews the new Random House Webster's Electronic Dictionary & Thesaurus from Reference Software.)

Because it is memory resident, it can be used at the same time as your word processing program, allowing you to look up the meaning of words in the text you are writing or reading. The program provides definition, spelling correction, hyphenation, pronunciation, parts of speech and word origins. You can also use it as a reverse dictionary, where you enter the meaning to find a word. If you wanted the names of all yellow flowers, for example, you could enter "yellow" and "flower."

The program would search the complete text of its dictionary and give you all entries that contained those two words.

The program also has a wildcard feature that lets you use place holders to represent any sequence of letters. This feature helps you find words even if you know only part of the spelling. Scrabble players will be happy to know that there is an anagram feature that finds words that can be made from a combination of specific letters.

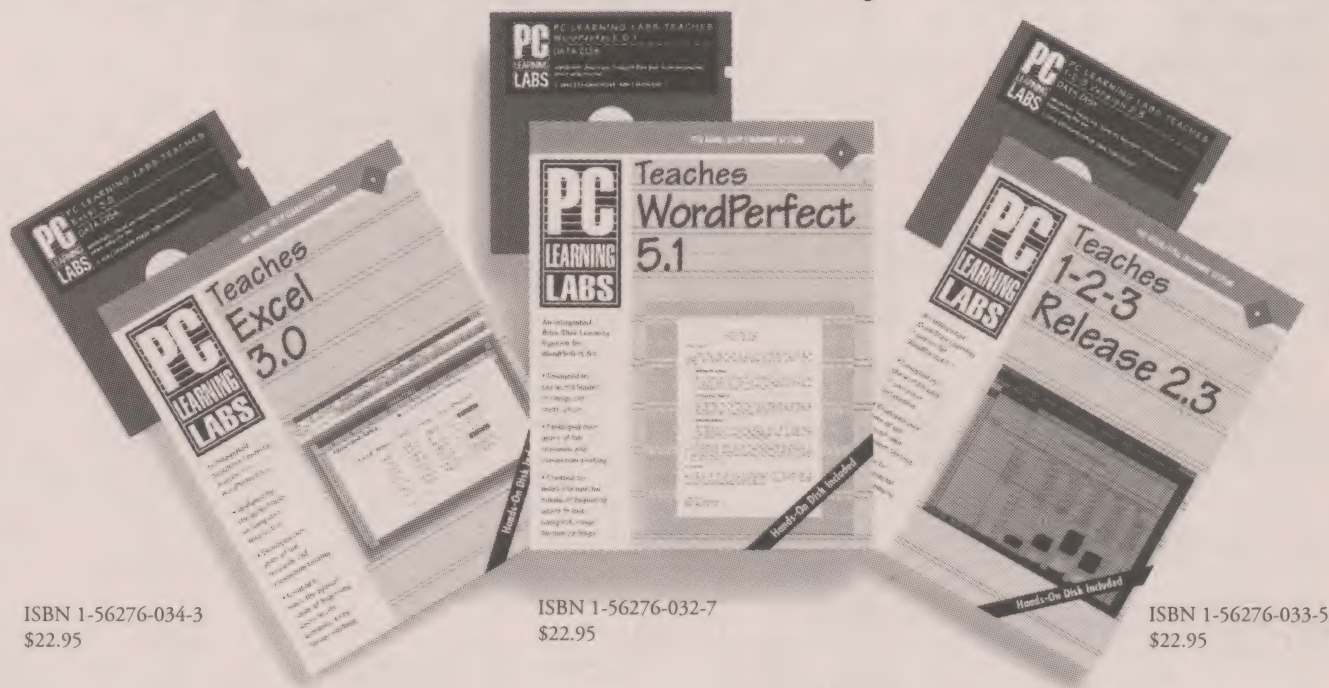
The Windows version will allow you to view multiple windows so that you can see both the dictionary definition and the thesaurus synonyms at the same time.

The program has a suggested retail price of \$99 for all platforms.

Several companies distribute more specialized writing aids. For those who write in foreign languages, WordStar's Writing Tools Division offers Lexica, a multilingual translating thesaurus and dictionary that runs as

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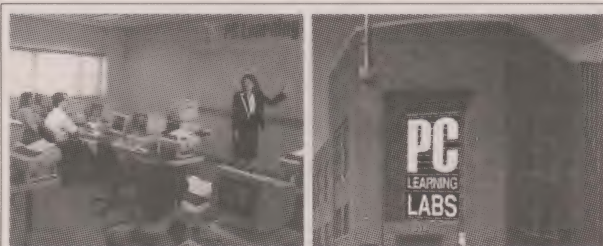
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a TSR program. It is available in English (American and British), German, French, Dutch and Spanish and lists for \$295. The theological writer might find useful a dictionary of Bible terms available for \$50 from Bible Research Systems. The Electronic Computer Glossary from The Computer Language Company contains over 5,000 computer-related terms and lists for \$29.95. For the same price, you can get a single issue of PC-Glossary, a searchable database of computer terms, from

Disston Ridge, Inc. A one-year subscription (four updates) costs \$79 and a multi-user local area network version (one issue) costs \$89. The program is available as shareware and can be downloaded from many bulletin boards as well as CompuServe and other online services that provide downloadable files.

The Complete Writer's Toolkit

The Complete Writer's Toolkit from

Systems Compatibility Corp. comes in one size — jumbo. The 13-disk set includes six writing tools: The Houghton-Mifflin CorrectText Grammar and Style Checker, the American Heritage Electronic Dictionary, the Concise Columbia Dictionary of Quotations, Roget's II Electronic Thesaurus, the Houghton-Mifflin Abbreviation Program and The Written Word III — Principals of Grammar & Style Reference Guide.

All the tools are memory resident, so
SEE NEXT PAGE

Product Info

American Heritage Electronic Dictionary, \$99 Correct Grammar, \$99 for Mac & DOS; \$119 for Windows Lexica, \$295

Version: DOS
WordStar International, Inc.
(Writing Tools Group)
1 Harbor Dr., Suite 111
Sausalito, CA 94965
800/523-3520; 415/332-8692
Fax: 415/332-8780

Bible Dictionary, \$49.95

Version: DOS
Bible Research Systems
2013 Wells Branch Pkwy., Ste. 304
Austin, TX 78728
800/423-1228; 512/251-7541

Complete Writer's Toolkit, \$129

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Fax: 312/670-0820

Electronic Computer Glossary, \$29.95

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Point Pleasant, PA 18950
215/297-5999
Fax: 215/297-8424

Grammatik IV, \$99

The Writer's Pack, \$89.95
Versions: DOS, Windows, Mac
Reference Software International
330 Townsend St., Suite 119
San Francisco, CA 94107
800/872-9933; 415/541-0222
Fax: 415/541-0690

Microsoft Word for Windows, \$495

Microsoft Corp.
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Fax: 206/936-7329

PC-Glossary, \$29

Version: DOS
Disston Ridge, Inc.
4915 22nd Avenue North
St. Petersburg, FL 33710-3502
800/788-0787; 813/323-0961

PowerEdit, \$295

Version: DOS
Artificial Linguistics, Inc.
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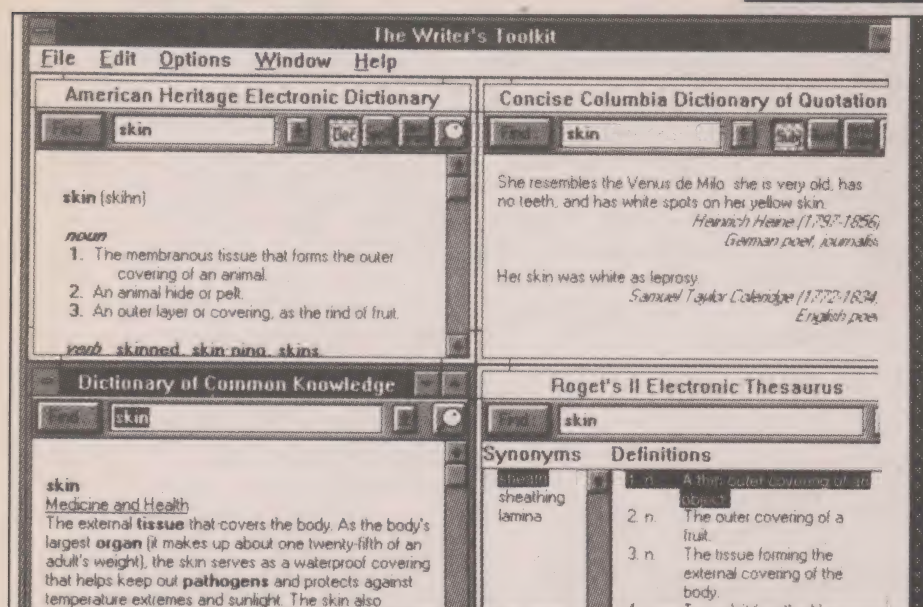
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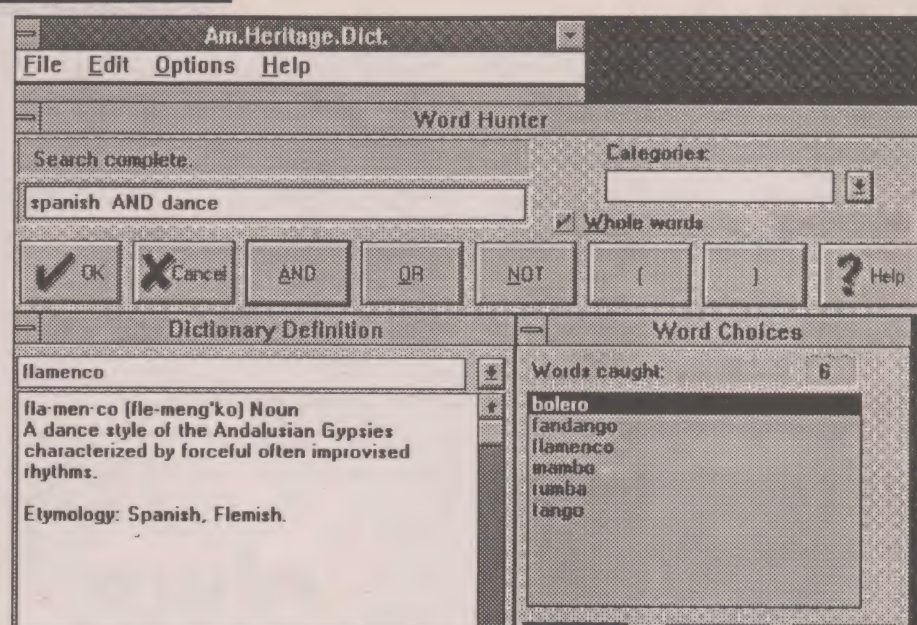
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The Complete Writer's Toolkit from Systems Compatibility Corp. is a \$129, 13-disk set of six writing tools, including a dictionary, a grammar and style checker, a dictionary of quotations, and a thesaurus.



Writing Tools Group's \$99 American Heritage Electronic Dictionary includes an online thesaurus containing 500,000 synonyms for 42,000 words and a dictionary containing 116,000 definitions.

FROM PREVIOUS PAGE

they can pop up in your DOS word processor. Most are versions of programs already discussed in this article. You can install all or some of the programs. The complete package takes several megabytes of hard disk space.

Reference Software offers its own set of bundled programs. The Writer's Pack (\$89.95) includes DOS versions of Grammatik IV, the AP Stylebook, the Definitions Plus American Heritage Dictionary, the Keynote Writer's Handbook and the American Handbook of

Business Letters. The AP Stylebook and Keynote Writer's Handbook, both developed by Digital Learning Systems, are memory resident reference books on disk that you can pop up while using other DOS software. The American Handbook of Business Letters consists of letters that you can use and modify with your word processor.

WordStar's Writing Tools Group doesn't currently offer a bundle, but the company has recently acquired the American English Writing Guide (\$59.95), the American Handbook of

Business Letters (\$49.95) and the Instant Library of Quotations (\$49.95). All three products are available for DOS and Macintosh.

* * *

Writing tools can help you improve your writing, but they're not infallible. A grammar checker can serve as a screening device to help flag mistakes and, hopefully, improve your writing. However, it won't catch all your mistakes. Use them, but don't rely on them. Feel free to overrule them if you have good reason to believe that your way is

better. Reference tools, like dictionaries and quotation libraries, can help you choose just the right word or quotation to spice up your document but they are not a substitute for experience and talent.

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Lawrence J. Magid is a nationally syndicated computer columnist and Silicon Valley-based analyst and writer. He can be contacted at P.O. Box 620477, Woodside, CA 94062, or on MCI Mail as "LMagid."

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By Bernie Zilbergeld

The Best Online Dictionary

Although I have more dictionaries and thesauruses in book form than I can count, in the last year or two I've gotten accustomed to being able to call up an electronic version on my screen. It's wonderfully convenient not to have to leave the keyboard. I've used and reviewed two online dictionaries in the past: Definitions Plus and American Heritage Electronic Dictionary (AHED). Both are sound products, although with different capabilities, but neither is the full text of a large-sized dictionary.

Now comes the real thing. Reference Software's Random House Webster's Electronic Dictionary & Thesaurus (RHWEDT) is the full text of the 1565-page hardcover *Random House Webster's College Dictionary*, published in May, 1991, and the full text of the 812-page *Random House Thesaurus*. This means both that it is huge (it comes on 13 3 1/2-inch disks and takes up 9.8 megs on your hard disk) and up-to-date.

RHWEDT has definitions of far more words (180,000 compared to 116,000

for AHED and even fewer for Definitions Plus) than any competing product. The thesaurus is not as large, having 275,000 synonyms and antonyms for 11,000 root or head words (AHED has a larger thesaurus).

The program works from the DOS prompt or from within your word processor. When you look up a word by pressing the hot keys (Shift-Cntrl-D, unless you want to make it something else, or by typing in the word or phrase), you get on screen exactly what you'd have if you looked up the word in a dictionary. But it's a lot faster doing it on the computer than picking up a

book and thumbing through it. To give an example of what the program offers, I put the cursor on the word "screen" several lines above and pressed the hot keys. RHWEDT gave the pronunciation of the term, word forms, hyphenation, etymology, 14 noun definitions, and 5 verb definitions. Pressing Esc gets you back to your document.

RHWEDT is as up-to-date as one can get. For example, it contains sexual harassment ("unwelcome sexual advance, esp. when made by an employer or superior, us. with compliance as a condition of continued employment

or promotion," noting that the phrase was first used in writing between 1975 and 1980) and notebook computer ("a small, lightweight laptop computer measuring approximately 8.5 and 11 in"). It has global warming ("an increase in the earth's average atmospheric temperature that causes corresponding changes in climate and that may result from the greenhouse effect"). Yes, I checked, it also has greenhouse effect. A few of the other current terms it contains are: GUI, computer virus, phone tag, significant other, secondhand smoke, designated driver, NIMBY (not in my backyard), veg out, damage control, and Perestroika. And there's biographical information—for example, George Bush and Mikhail Gorbachev—as well as geographical. I looked up New Jersey and got its location, size, population, and capital. In other words, this is a real dictionary.

There's a very fine search feature, similar to the one in AHED. Suppose you're thinking of something having to do with flowers, but you don't know which one. If you search for flower, the program gives an incredible list (scores of words) of terms that are flowers or have to do with flowers. Here are just a few of them: "bluebonnet, blue flag, boltonia, bottlebrush, boutonniere, bract, broccoli." Same thing if you're

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FROM PREVIOUS PAGE

thinking of a part of a word but don't know the word; all you know is that it has, say, "byte" in it. Search for "byte" and you'll get a very long list of words that have "byte" in it.

A Nice Thesaurus

The thesaurus is also quite nice. One way in which it is better than most is that it begins with a sample usage. When I looked up compel, for instance, it started with this sentence: "Bad health compelled him to resign from his job." This was followed by the following synonyms: "force, drive, require, necessitate, oblige, make, give no choice but." This list, in combination with the sample sentence and the antonyms, gives a pretty good idea of what you're dealing with. If you want, of course, you can check out the meaning of all the synonyms. My only complaint about the thesaurus is that it isn't as comprehensive as the dictionary. So I often ran into a situation like I did when I looked up palatable ("acceptable or agreeable to the mind or feelings"). When I asked for synonyms, I was informed it had none for that word. I hope the people at Reference Software will consider doubling the size of the thesaurus (more specifically, the number of root words) for the next version of RHWEDT.

For people who like to play word games like Scrabble, there's a wonderful anagram search. You can type in a

string of up to 30 letters and get back a list of all the words that have the same letters in different order.

RHWEDT is so easy to use it's not even worth talking about. The small manual is fine, but most people won't need it. The installation of 13 disks takes a while, but after that you'll be up and running in less than two minutes.

The program has wonderful flexibility. It's very easy to get a definition, then go to the thesaurus by pressing one key to get synonyms and antonyms for your word, then go back to the dictionary by pressing one key to get more precise meanings for any synonym you want to know more about. RHWEDT will usually find your word even if you spell it incorrectly.

I ran the program on my Northgate 33MHz 386, the same machine I tested Definitions Plus and AHED on. Definitions Plus is the fastest, coming up instantaneously, but it's also a much smaller and less comprehensive program. RHWEDT is a bit slower, taking a second here and there, but faster than AHED. The program has mouse support but I couldn't actually see what advantage there is to using a mouse with it.

I very much enjoyed using RHWEDT and will continue with it. Of similar programs available, it is closest to AHED but it gets my vote because its dictionary is so much larger, more up-to-date, and includes biographical and geographic entries, and also because it

requires only 6K RAM, compared to 43K for AHED. I can't think of a writer — that is, anyone who writes anything on a computer — who wouldn't appreciate and benefit from using this wonderful utility.

I know some people will demur because they don't have a free 10 megs on their hard disks. If you don't have the space, you don't have the space, but this consideration is the main reason I have been recommending large hard drives (80 meg absolute minimum) for some time. The newer versions of the main application programs are averaging about 6 to 9 megs and although you can always cut them down by deleting unnecessary files (for example, tutorial or learning files after you're done with them, printer files for printers you don't have), we're still talking about lots of disk space. And, as in the case we're discussing here, a lot of the newer utilities are also disk hogs. You might want to keep this in mind next time you buy a new computer or hard drive.

If you do have the space, I highly recommend RHWEDT. It's easy and fun and does exactly what it's supposed to do quite capably. The list price is a bit on the high side (\$129), but the actual "street" price of under \$100 is much more palatable. If its makers follow my advice and double the size of the thesaurus next time around, the program will come close to perfect. The version of RHWEDT I have runs only under DOS, but Mac and Win-

dows versions are supposed to be available soon. RHWEDT is available in most software stores.

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Bernie Zilbergeld is a practicing psychologist and author who has been using personal computers for eight years and has written extensively about them. Correspondence on new products or suggested topics for columns are welcome but must be mailed. No phone calls, please. Bernie can be reached at 1901 Leimert Blvd., Oakland, CA 94602.

The opinions expressed in this column are the writer's and do not necessarily reflect those of *Computer Currents*.

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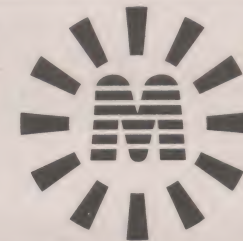
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By Tony Bové

Voyager's Expanded Books Even Better Than the Real Thing

Before the introduction of the Mac PowerBooks, it was inconceivable that people would want to read books on the screens of their laptop computers. There are far more critics than there are advocates of the notion that people might want to read text on the screen rather than on the paper page. The screen is considered a necessary evil in order to bring us the benefits of text searching, electronic text and voice annotation, the display of text in different fonts, and on-demand printing.

Out came the PowerBooks, and now people are getting excited about reading electronic books on laptop computers. The Voyager Company, in Santa Monica, Calif., a pioneer in the publishing of multimedia content, came to the Macworld Expo in San Francisco early last month with its Expanded Books series designed specifically for the PowerBook, and started

selling them briskly at \$20 a book. What happened?

One clue can be found in Voyager's flyer provided in the Expanded Books packages. The Voyager team wrote about how they started the Expanded Books Project with the notion that commercial products would not be available until 1995 that could provide a

suitable electronic book experience. However, when they saw a prototype of the PowerBook in 1991, they changed their plans. "What we saw was Palatino type on a bright, off-white display that didn't jump or flicker, surrounded by the PowerBook's elegant gray borders," wrote the team. "The effect was unlike anything we'd associated with

computers. It was eerily book-like."

Another clue can be found in Douglas Adams' foreword to his own *Hitchhiker's Guide to the Galaxy* "trilogy" of four books, neatly provided on one Expanded Books disk, in which he writes, "You're meant to be reading this in the bath!" In many ways, the PowerBook offers conveniences that books simply can't offer, such as hands-free reading and reading in the dark.

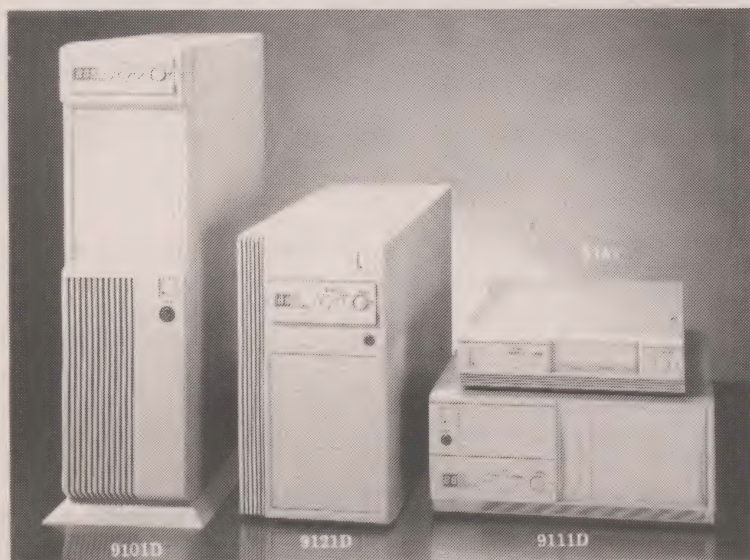
Hitchhiker's Guide to the Galaxy is an excellent choice for an electronic book that offers marking and searching capabilities. There are plenty of subplots and characters to search for, and plenty of jokes to retrieve.

In fact, the Adams novels feature an electronic book called, of course, *Hitchhiker's Guide to the Galaxy*. "When I wrote the fictional story of a sort of electronic book," writes Adams in the foreword, "it didn't occur to me that within a few years it would actually be published on one... I hadn't even remotely understood how powerful computers would become and that the single most interesting and important problem was how information would

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MAC PURIST

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In fact what he was really looking for when he stared distractedly into the sky was any kind of flying saucer at all. The reason he said green was that green was the traditional space livery of the Betelgeuse trading scouts. Ford Prefect was desperate that any flying saucer at all would arrive soon. He got stranded any mindbogglingly. Ford wished that because he knew lifts from them. He knew how to see the Marvels of the Universe for less than thirty Altairian dollars a day. In fact, Ford Prefect was a roving researcher for that wholly remarkable book, *The Hitchhiker's Guide to the Galaxy*.

Human beings are great adapters, and by lunchtime life in the environs of Arthur's house had settled into a steady routine. It was Arthur's accepted role to lie

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Voyager's Expanded Books (shown is Douglas Adams' *Hitchhiker's Guide to the Galaxy*) let you search the text for specific words or phrases. You can type the words, or select them with the mouse and use a pop-up menu of search choices. The electronic books also let you mark pages so that you can go back to them quickly, and type annotations in the margins of pages. You can also copy text into a notes file.

FROM PREVIOUS PAGE

pass between computers and people—the interface. The description of Ford Prefect having to look up an entry in an index and then type in the page number to find it is so cumbersome and clunky it might almost have been dreamt up by a team at Microsoft."

Judging a Book by the Cover

The PowerBook is probably the best delivery vehicle for electronic books at this point. It is very popular, and it offers a high-contrast screen that looks like a book page. It is conceivable that the market of PowerBook users will be quite large, perhaps large enough to support the sales of \$20 floppy-based books. Whether a company can make a profit on such a publishing venture remains to be seen.

The electronic book looks good on a PowerBook because the Mac interface is appropriate and responsive. With the backlit models, you can read in the dark with no other illumination. The PowerBooks are portable enough to use anywhere, and the Voyager software offers almost hands-free reading (although you need to press a single key to move from page to page, you don't have to hold open the page as you do with a book).

Alan Kay recognizes that the PowerBook is not the best we can do. As he writes in the foreword to *Hitchhiker's*, "it should be no more than 2 lbs, have a bigger screen, more computing power, and have various wireless networking strategies."

There is no technical reason why DOS laptops could not be outfitted with appropriate software to "play" electronic books. The problem is, which software? No doubt Microsoft Windows will be chosen as the preferred environment, even though it runs sluggishly on most laptops. Of course, DOS laptops don't offer sound.

Meanwhile, electronic books will flourish on the PowerBooks because HyperCard is available on every machine to provide the operating environment for the publisher's search and retrieval software, and because the PowerBook offers a complete Mac System, including support for sound. The PowerBook 140 and 170 also offer the capability to run QuickTime movies.

Unfortunately, Apple missed an opportunity to spread the use of multimedia technology by not issuing a version of QuickTime for 68000 machines such as the PowerBook 100, but the company may rectify this situation by the spring. For now, the PowerBook 100 is under-powered to deal with multimedia, except text, one-bit images, and sound. Expanded Books have to be shoe-horned into the constricting two-megabyte RAM configuration. Sure, everybody should get more RAM, but really, Apple should make affordable configurations that include more RAM.

Voyager was thus constrained to offering text with limited graphics and sound, but these forms were enough to provide an excellent experience. Martin Gardner's *Complete Annotated Alice* includes one-bit renderings of original artwork, and Michael Creighton's *Jurassic Park* offers dinosaur pictures, animations, and sounds.

These floppy-based presentations are a major leap ahead of the content

Product Info

Expanded Books, \$19.95 each
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titles for products such as the Sony DataDiscman. In the case of electronic books, you have to judge a book by its "cover" because all of the benefits that make electronic books better than regular books depend on how the software (in Voyager's case, a text stack in HyperCard) presents the content, and how you navigate and search through the content.

All You Need is the Word

The Voyager reader stack provides the ability to search for words and phrases. Several bookmarks can be set, notes can be written in the margins and in separate notes files, search operations can be saved, and you can move to any place in the book.

You can search by individual words, thereby easily following a story thread

word or phrase in the text of the book and in margin notes. You can read page-by-page (clicking an arrow or pressing the arrow key), or go directly to marked pages, or to any page by number.

The transition from "turn-the-page" literature to "search-by-word" literature may be subtle, but it will change the organization and style of writing. With multimedia features, novels can take on other characteristics such as sounds, images, and multiple threads that can be followed to the end. A

reader may experience a narrative that flows from beginning to end but also has many layers to explore as well. (It seems that one of my favorite books, *Gravity's Rainbow* by Thomas Pynchon, would fit nicely in this format.)

The medium is also useful for pairing books that are about similar topics, and letting you search through the books or through an entire library on the hard disk. I see no reason why educational titles could not be provided as Expanded Books, letting students explore a variety of subjects. The

learning experience could be enriched greatly by this medium.

Voyager's stack may eventually (in some form) be licensed to others and be made available commercially for individuals to self-publish books. It would certainly boost the appeal of electronic books if there was one standard text retrieval interface, or at least only a few. The searching mechanisms must work for all books. Let's hope the publishers see the wisdom in adopting one universal standard for searching across books.

**The learning
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or subplot or retrieving special passages. Save these passages on disk, or write notes in the margins or in separate files. Load a new book anytime you want, without deleting other books; carry a library wherever you go. And if you want to give your eyes a rest, change the point size or font of the text to make it more readable.

Voyager's Expanded Books let you type text in the margins, mark passages with black lines, copy passages to a notebook page or text file, "dog-ear" (mark) a page to go back to it quickly whenever you want, and set selected text to be bold or underlined. By clicking on a word and dragging (or selecting Find), you can use a pop-up menu to find the first, next, previous, or last occurrence, or all occurrences, or all in context (with sentence fragments and page numbers to identify the references). The stack can find any

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When not reading his *PowerBook* on the beach, Tony edits several newsletters with his partner Cheryl Rhodes, including the *Bové & Rhodes Inside Report on Multimedia* and the *MacroMind Developer Letter*. For details, contact him on MCI Mail (TBOVE), CompuServe (70105,722), or AppleLink (D0493), or by writing to Bové & Rhodes, Box 1289, Gualala, CA 95445.



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MACUPDATE

Supermac's Video Spigot

The Video Spigot was a popular item at last month's Macworld in San Francisco, Calif., as it represents the easiest way yet available to transfer full-motion analog video images to digital format, a process required for the creation of digital video "movies" of the kind created with programs such as Adobe's Premier.

A spokeswoman for Supermac (Sunnyvale, Calif.) said that the Video Spigot boards are so popular that the company sold \$1.1 million worth of them last December alone, the first month they were shipped. Today, there is still a backlog of orders with retailers unable to stock enough of them, according to Laurie McLean, a public relations representative for Supermac.

Using the Spigot's software along

with the cards, a Macintosh can be used to "dump" rolling video directly to the computer's hard disk, changing it from analog to digital form. Screenplay software then allows the user to view, crop, compress and store the video in a variety of compression forms, including Apple's own or Supermac's codec system, its proprietary compression technology. The digital video can then be used in programs like Adobe Premier.

The Video Spigots cost \$499 for the LC or SI version and \$599 for the Macintosh Nubus versions. For a limited time, they are bundled with a free copy of Adobe Premier. Supermac can be reached at 408/245-2202.

— Wendy Woods, Newsbytes

Sculley Boasts 100 QuickTime Applications

John Sculley, CEO and chairman of Apple, provided more information about the firm's consumer electronics plans and tried to demonstrate that Apple is way ahead of the competition in the field of multimedia.

In the keynote speech at Macworld in San Francisco, Sculley said networking and telecommunications will drive the '90s and that it will be a "different consumer electronics industry" than what we know today. This will be an industry of PDAs (personal data assistants), he repeated from a speech at the Consumer Electronics Show the previous weekend. He said Apple's consumer electronics products will combine various new digital technologies.

"The promise of multimedia is that it will improve our enjoyment of information," said Sculley, saying that such a development was now possible

thanks to QuickTime, a software extension to System 7 which enables developers to smoothly integrate sound, video, text and graphics into documents and applications. QuickTime has component managers for various input devices, including digitizer cards, VCRs, and other peripherals. Sculley announced that there are now over 100 QuickTime third-party products, more than the numbers of products supporting any other multimedia scheme.

Sculley showcased several new QuickTime applications, including live video conferencing in a window of the Macintosh, a children's program from Voyager similar to The Playroom by Broderbund, and new multimedia "novels" from Voyager that feature keyword search of phrases and words, as well as graphics with sound.

— Wendy Woods, Newsbytes

Enhanced GreatWorks 2.0

Symantec (Cupertino, Calif.) has introduced an upgrade to GreatWorks, an integrated Macintosh software package which competes with Microsoft Works and ClarisWorks.

The new software, which includes eight applications in one program, offers more color options, a drawing and editing layer across all modules, and enhanced dialogue and menu selections, the company claims. There is a color paint module and new drawing tools. E-Z Envelopes is a program that works inside the word processing

module to address envelopes, and there is a print preview mode available.

GreatWorks works with Apple's new System 7 operating system. It includes a word processor, database, spreadsheet, charting program, drawing module, paint program, outliner, and communications program.

The program is set to hit the market in the first quarter of this year at a cost of \$299. Registered users can upgrade for \$49. Call 408/253-9600 for more information.

— Wendy Woods, Newsbytes

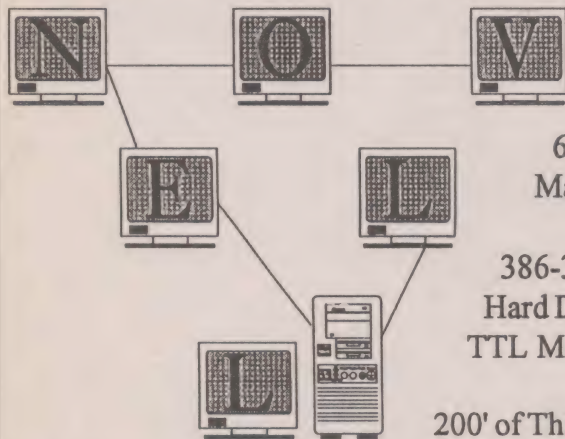
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WordPerfect Sports Video

WordPerfect (Orem, Utah) claims to be the first word processing software company that will ship a word processor that offers the ability to insert QuickTime "movies" within documents.

The Macworld demonstration of its WordPerfect upgrade featured a talking resume, with a small video image of the applicant "talking" when clicked with the mouse. The upgrade is expected to ship before the end of this month.

WordPerfect for the Macintosh version 2.1, according to the firm's Mac Marketing Manager, Don Sorenson, now features the option "movie" in the tools menu, thanks to the integration of Apple's QuickTime, the multimedia extension to System 7. The "movie" command can be used to insert a movie into the word processing document. QuickTime treats the movie like any other graphic. When you double click on the movie, it plays. Like any other graphic, you can also size the movie window.

WordPerfect 2.1 for the Macintosh is

System 7 savvy, as opposed to just compatible, meaning it can take advantage of "publish" and "subscribe" features, TrueType, Apple Events, and Balloon Help.

The correct hyphenation of words which have been added to the main Speller dictionary by the user can now be displayed, and the user can add and delete conversion resources.

The suggested list price for the upgraded program is \$495. Present users of any previous version of WordPerfect for Macintosh can upgrade for \$89. Users can also purchase a disk upgrade, which includes disks and license only, for \$39. Owners of WordPerfect 2.1 receive toll-free support.

WordPerfect 2.1 for the Mac runs on System 6.0.3 or later.

For more information about WordPerfect 2.1 for the Mac, call WordPerfect Corporation at 800/451-5151. To order the upgrade, call 800/321-4566.

— Wendy Woods, Newsbytes

New Macintosh Accelerator Boards Use Motorola Chips

Motorola (Austin, Tex.) has announced that several new 68000 family microprocessors will power a range of new Macintosh accelerator boards being introduced by Radius (San Jose, Calif.), Fusion Data Systems (Austin, Tex.), Impulse Technology (Cumming, Ga.), and Daystar Digital Inc. (Flowery Branch, Ga.).

Radius will introduce its Rocket 25i, an addition to its existing Rocket line. The Rocket 25i is powered by Motorola's 68LC040, a recently-announced low-cost version of the 68040. The low-cost model does not include the floating point unit, and adds low-power buffers to maintain a 22MIPS (million-instructions-per-second) rate. The Rocket 25i carries a price of \$1,499. Radius can be reached at 408/434-1010.

Fusion Data Systems is showing the TokaMac II FX and the TokaMac ELC. The FX is powered by a Motorola 33-megahertz (MHz) 68040 and is a high-performance upgrade for the Macintosh IIfx. The 33MHz chip is expected to start volume production late in the first quarter, Motorola said. The TokaMac II FX is priced at \$3,995, and should be available in April, depending on Motorola's delivery of the chip. Call 512/338-5326.

Impulse Technology's Performance/040 is said to be a Nubus performance upgrade for the entire Macintosh II family. It is also powered by a Motorola 33MHz 68040. The company says the

board is ideal for applications such as intensive CAD (computer-aided design), pre-press work, three-dimensional rendering, and scientific applications. The \$2,995 33MHz 040 is expected to be available late in the first quarter, again depending on Motorola's production time table. There is also a 25MHz version of this unit, which is shipping now, with a price of \$2,495. Call 404/889-8294.

DayStar's multifunction upgrade board for the Macintosh LC is called the Equilizer LC. The Equilizer adds a Motorola 16MHz 68030 to the Mac LC, allowing users to run Apple's System 7 virtual memory. The Equilizer carries a price of \$349 without a math coprocessor, and \$449 with a math chip. DayStar expects to start shipping in February; call 404/967-2077 or 800/962-2077 for details.

Motorola can be reached at 512/873-2000.

— Jim Mallory, Newsbytes

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See page 43.

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NEW PRODUCTS

Enhanced Version Of pcAnywhere

Symantec (Cupertino, Calif.) has released new versions of the pcAnywhere products, developed by Peter Norton. The product is designed to control one IBM or compatible personal computer from another, via the telephone lines.

pcAnywhere and similar products, such as Carbon Copy, are commonly used by people who want to control a PC at work from a home computer, or by consultants who want to troubleshoot a client's computer problem without traveling to the client.

Two versions of pcAnywhere — Norton pcAnywhere 4.5 and the Norton pcAnywhere/LAN (local area network) version 4.5 — are available for both Windows and DOS.

Enhancements to the new versions include control of a host PC running Microsoft Windows 3.0 in any of its modes, including real, standard, or enhanced, as well as full mouse support for DOS and Windows applications. The new versions are also designed to recover from telephone line errors and to sustain the integrity of the connections even over noisy telephone lines.

The Norton pcAnywhere has a quick-connect feature added to simplify the connection process by reducing the number of parameters the user has to set when connecting to a host PC from 15 to two.

Popular file transfer protocols such as ASCII, X- and Y-Modem, as well as Kermit allow users to connect to public mail and bulletin board services,

and access mini and mainframe computers.

Automation of routine communications tasks without user intervention is available via a new script language. Symantec claims that the automation can be done in the background as well as in the foreground, and remote users can transfer files without interfering with ongoing host computer processing. Over 90 drivers for specific modems are included so users can take advantage of specific modem capabilities.

The Norton pcAnywhere/LAN product provides a gateway for non-dedicated communication servers and is compatible with any asynchronous communication server following the NASI/NCSI interface, such as Novell's NACS and Network Products ACS2.

Symantec also claims that the new products are fast, running at speeds up to 115,200 bits-per-second (bps). The speed allows pcAnywhere to take advantage of high-speed modems and ISDN (Integrated Services Digital Network) links.

Norton pcAnywhere can be purchased with both the Host PC and Remote PC software in the same package or separately, to suit the user's needs for multiple remotes or hosts. The suggested retail price for Norton pcAnywhere is \$179. The Norton pcAnywhere/LAN, which includes network software and licenses for two nodes, is available for \$495. For more information, call 800/441-7234.

— Linda Rohrbough, Newsbytes

Sierra's Environmentally-Correct EcoQuest

In an effort to introduce children to ecological threats facing Earth's oceans, Sierra On-Line (Coarsegold, Calif.) has introduced the adventure game EcoQuest: The Search for Cetus, for the IBM PC and compatible platform.

In the game, players adopt the persona of a young boy called Adam, who is taken on an undersea journey by a friendly dolphin to search for a missing whale king. The boy travels to a ruined city hidden in a coral reef and encounters undersea creatures damaged by pollutants. To finish the game, Adam must face the evil creature driven mad by toxic chemicals and discover the fate of the missing king.

According to Sierra, hand painted and digitized backgrounds and character close-ups bring to life the exotic beauty of Cetus's undersea kingdom. The game is targeted at ages 10 and up.

Continuing the "environmentally-

correct" theme, the company claims EcoQuest is packaged in recycled and recyclable boxes and the box sleeve is printed with biodegradable soybean ink.

The company is packaging a book called *I Helped Save the Earth: 55 Fun Ways Kids Can Make a Difference*, which consists of constructive ideas to help save the planet. Sierra claims it will also donate a portion of the proceeds from the sale of each EcoQuest to The Marine Mammal Center in Sausalito, California.

EcoQuest: The Search for Cetus is shipping with four 3 1/2-inch or four 5 1/4-inch high-density disks, at the suggested price of \$59.95. All major sound cards are supported and a hard disk is required. Call 209/683-4468 for more information.

— Ian Stokell, Newsbytes

LotusWorks Version 3.0 Due Out First Quarter '92

Lotus Development (Cambridge, Mass.) has announced the introduction of LotusWorks 3.0, a new release that it refers to as "a major upgrade to its integrated software program providing an intuitive user interface, enhanced integration among modules, an improved word processor, context-sensitive help, and tutorial functions."

The new release is currently in beta test and is expected to ship within the first quarter of 1992. It has a suggested retail price of \$149. An "upgrade price" will be determined for users of the current version of LotusWorks as well as for users of Microsoft Works, PFS:First Choice or Eight-in-One.

Lotus has redesigned the user interface to give it a more "Windows-like" feel and has added additional features to the system such as the inclusion of

WordFinder Electronic Thesaurus Release 3.0 from Microlytics, print preview capabilities, an expanded spell checker, the use of downloadable Bitstream soft fonts, and the ability to more easily add graphics to word processing documents.

Bruce Johnston, general manager of Lotus' entry products group, said, "We're very pleased with user response to LotusWorks. We've shipped more than one million copies to date and are committed to delivering new versions that meet users' DOS and Windows computing needs."

Lotus can be reached at 617/577-8500 or 800/343-5414 for product information and customer service.

— Barbara E. McMullen & John F. McMullen, *Newsbytes*

Alloy Debuts Entry-Level Network Requiring No Network Hardware

Alloy Computer Products, Inc. (Marlborough, Mass.) has introduced a DOS-based entry-level networking product said to require no networking hardware. 386/MultiWare EZ reportedly lets users inexpensively share computing resources with each other via the server COM ports of a 386 or 486 host computer.

386/MultiWare EZ is a multi-user, multi-tasking software program that reportedly allows up to three users, based on terminals, PCs or Macintosh computers, to share the resources and peripherals of a 386 or 486 PC host computer, which is also a fully functioning user. Users are connected to the host via its COM1 and COM2 ports.

Each user on the system can perform up to eight tasks simultaneously and share any peripherals, such as printers, connected to the host's LPT ports or, if the system is configured for only two users, to the COM1 or COM2 port that is not attached to a terminal. Only 2MB to 3MB of RAM is required on the host 386 or 486 to serve all three users.

386/MultiWare EZ is based on

Alloy's award-winning 386/MultiWare product. Like 386/MultiWare, 386/MultiWare EZ runs true MS-DOS, so it is compatible with hundreds of familiar software programs.

386/MultiWare EZ works by dividing the processing time of the host 386 or 486 processor among users and tasks, creating a "virtual" 8086 PC for every task. Each task has 640K of RAM, its own AUTOEXEC.BAT and CONFIG.SYS files and can load its own TSR applications.

A user who is remotely located and based on a terminal, PC or Macintosh can dial in via modem to his virtual PC, where he can log on to the 386/MultiWare EZ network. The remote user does not communicate with the network but actually functions as a node on the network, eliminating the need for a dedicated remote access server and telecommunications software.

386/MultiWare EZ costs \$349 from Alloy Computer Products, One Brigham Street, Marlborough, MA 01752. Telephone 508/481-8500.

Harvard Graphics For Windows Ships

Hoping to cash in on the lucrative world of Microsoft Windows applications, Software Publishing Corp. (Santa Clara, Calif.) has begun shipping Harvard Graphics for Windows, a presentation graphics product.

According to the company, Harvard Graphics for Windows provides users with more chart types than any other Windows-based presentation graphics program. In addition to standard text, pie, and XY charts, the product offers data-driven table charts, high/low/close charts, and organization

charts. Users can mix multiple chart types on a single slide and create their own custom templates.

Templates automatically position and format text, table and organization charts, as well as graphics and drawings. According to the company, this enables users to change the appearance of an entire presentation with the click of a mouse button.

For further information, Software Publishing can be reached at 408/986-8000.

— Ian Stokell, *Newsbytes*

TEN WOMEN WHO MADE A DIFFERENCE

Read the fascinating stories of 10 women who helped shape the PC industry. **WOMEN, TECHNOLOGY & POWER**, by computer journalist Marguerite Zientara, includes the stories of Esther Dyson (Release 1.0), Portia Isaacson (Future Computing, Inc.), Therese Myers (Quarterdeck Office Systems), Joyce Wrenn (IBM), Janelle Bedke (Software Publishing Corp.), Lorraine Mecca (Micro D), and more. This book offers secrets to success, a behind-the-scenes look at the industry, insight into the psyches of the super-successful, and a hard look at the inevitable tradeoffs along the way.

Originally released in December 1987, the hard-cover edition of **WOMEN, TECHNOLOGY & POWER** (Amacom Books, New York, 282 pp.) is now available directly from the author at **50% OFF THE ORIGINAL PRICE**. (The author will be happy to autograph copies upon request.) Please send a check or money order for \$10.95 per copy (shipping & handling included), payable to the author, to:

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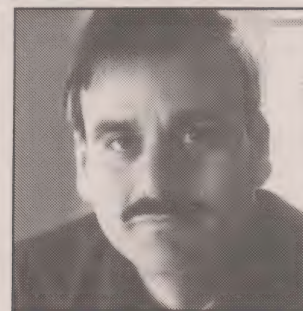
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USER TO USER



By Nick Anis

Nifty \$80 Speed-Up For Windows

Microsoft tells us that there are more than seven million copies of Windows out there. That number is about right, but only some of them actually *use* Windows; there are probably only a million or two Windows "users." Too many Windows users spend time counting the ceiling tiles waiting for screen redraws and trying to figure out how to get the performance they paid for out of their hardware.

If you've tried to juice up your Windows video maybe something like the following has happened to you too. You ran Windows 3.0 Setup and tried to change the video driver and received the insidious message "Insert disk with manufacturer's video drivers." Unless you have a flair for neatness and know exactly where all your floppies are, this stupid message can drive you bonkers. Even when choosing lower-resolution drivers, just locating the Windows 3 distribution disks can be a hassle.

Then I came across a copy of WinSpeed that was sent to me for review. WinSpeed is available direct from New Hampshire-based Panacea for \$79 and is also offered through dealers. This product isn't really that expensive, but users could end up paying more for a Windows video driver than they did for Windows itself. Panacea's technical support sure beats the support Microsoft offers for Windows; WinSpeed comes with unlimited technical support for as long as the user owns the product. They also have a toll-free sales number, 800/729-7420, for users to locate dealers in their areas or to order products direct, but the technical support line is a toll call.

There isn't much to WinSpeed's 12 pages of documentation. Since the product is simple to figure out and use, however, this isn't much of a problem. I did notice that the user manual lists the phone number for technical support, and other e-mail addresses including CompuServe and even Panacea's technical support fax number — information that some aggravating manufacturers sometimes make you dig for deep in the bowels of their packaging.

The WinSpeed package is actually a collection of screen drivers with a special program that detects the video chipset on the user's SVGA card. The current release, version 1.0, supports 5 video chipsets, including ATI, Trident,

Tseng Labs ET-4000, Video 7, and Paradise.

PC Magazine's Winbench version 2.0 showed that the WinSpeed drivers for the ET4000 chip and the Trident Chip were about four times faster at 640x480 resolution. The perceived speed difference is more significant with slower CPUs like 286 and 386 systems. On my two 486 systems the difference was not as noticeable, but the benchmark, which I ran on one of the 486s, says the WinSpeed video driver is much faster, so I guess it *is* faster.

Another WinSpeed benefit is that the drivers will re-create the appropriate screen fonts for the mode you select. Too many casual Windows users have not bothered to use the higher-resolution drivers available for the SVGA chipset. Installing WinSpeed is an easy way to correct this oversight. Instead of rummaging around for your video card's Windows 3.0 video drivers — or worse, finding out that your card didn't come with any — you can just put in WinSpeed and run INSTALL from native DOS. This is a nice feature because it gives you an extra chance to get Windows working if you're having trouble with the Windows settings you are currently using.

WinSpeed supports higher resolution than the Windows 3.0's standard Windows VGA driver, which is only 640x480 and 16 colors. WinSpeed also supports the highest resolution your card can handle. If you have a megabyte of RAM on your card, then you

Product Info

WinSpeed, \$79

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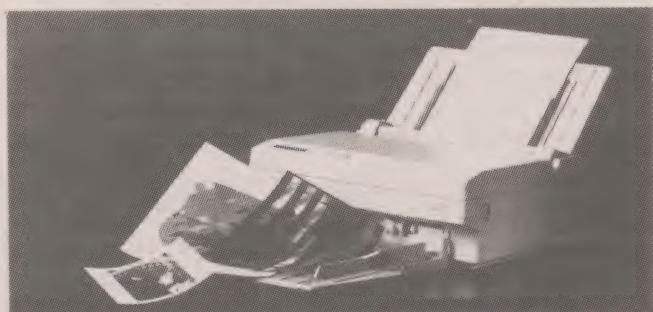
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can get all way up to 1024x768 resolution, but only 256 colors are supported. Panacea has decided not to support 16 colors because development efforts for Windows applications are geared to 256 colors and higher. This support strategy makes sense. Unlike higher-resolution video modes that can look lousy with the wrong monitor and card combination, there is no trade-off in using a 256-color mode instead of a 16-color mode. So go for it, right?

Most users can get the full-screen resolution the video card supports just by using the Windows driver that came with their cards, or by contacting the manufacturer for one. Besides better resolution, WinSpeed offers a significant performance boost that will come in handy during panning, zooming, and screen redraw. WinSpeed can reduce these video bottle necks that can otherwise slow Windows 3.0 video to a crawl.

The WinSpeed software comes on two 1.2MB 5 1/4-inch floppy disks or four 3 1/2-inch 720K microfloppies. The files come in compressed form — the screen drivers are contained in five separate self-extracting LHA (LHARC) files. The appropriate screen driver is identified by the chip detection software and the corresponding video driver is extracted. This installation method saves some disk space but it is also a rudimentary form of copy

protection. The install program squawks to the user if any of the screen drivers are already extracted. It will allow for successive installations but will notify the user that the program has already been installed and remind him about the licensing agreement and so forth.

If you're looking to speed up Windows 3.0 and want to get the full benefit of your SVGA video chipset's capabilities, this product is a good choice. In my case, avoiding the hassle of having to find my video drivers was more than worth it, not to mention the convenience of having new fonts, faster screens, higher resolution and additional colors.

Best of all, I managed to get a "User to User" column written and get my Windows system fixed, all in one shot. Now if I could just get David Needle to arrange the editorial calendar to fit the remaining hardware and software problems I need to get taken care of — of course, *Computer Currents* would also have to become a daily...

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Nick Anis is a freelance writer and co-author of several best-selling computer books. Write to him at User to User, 1125 Bramford Court, Diamond Bar, CA 91765, or MCI Mail ID 389-1702, NANIS, or via his bulletin board at 714/396-0014.

Windows Setup Files Have Many Users Stumped

When I reviewed WinSpeed, I noticed that Panacea's installation program overwrote the Windows SETUP.INF file. It turns out that many Windows-based programs have this annoying deficiency.

Besides DOS's CONFIG.SYS and AUTOEXEC.BAT and all the memory management mumbo jumbo, Windows has three additional files you have to figure out.

In addition, there's on-disk documentation that most users don't know about. The configuration file WIN.INI has the two help files WININI.TXT and WININI2.TXT. Another configuration file SYSTEM.INI has the three help files SYSINI.TXT, SYSINI2.TXT, and SYSINI3.TXT. If you take a look in your Windows directory, you should find the following documentation files:

3270.txt	9058	5-01-90	3:00a
networks.txt	30665	5-01-90	3:00a
printers.txt	20558	5-01-90	3:00a
readme.txt	33407	5-01-90	3:00a
sysini.txt	21573	5-01-90	3:00a
sysini2.txt	21991	5-01-90	3:00a
sysini3.txt	27602	5-01-90	3:00a
winini.txt	25099	5-01-90	3:00a
winini2.txt	18466	5-01-90	3:00a

The files WIN.INI and SYSTEM.INI are routinely modified by Windows-based install programs. Sometimes these modifications end up causing Windows to crash or behave erratically when restarted, other times they work as they should.

Another Windows configuration called SETUP.INF can also get you into trouble. Some Windows-based instal-

lation programs arbitrarily overwrite SETUP.INF instead of updating the one you have. This can cause you problems when you run SETUP. You can get around this by inserting each of your Windows distribution disks until SETUP finds the right disk, but this can be confusing. The location of files on distribution disks varies between 5 1/4-inch and 3 1/2-inch formats and various Microsoft and OEM releases. Besides potential problems running SETUP, any changes previously made to SETUP.INF will be lost if this file is replaced with another software publisher's file.

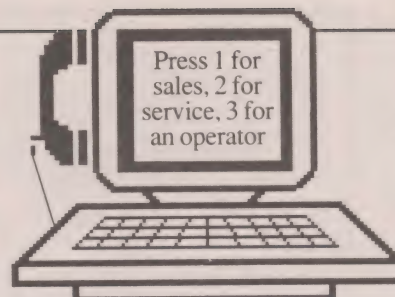
The best way to handle problems with these files is to make backup copies of all of them before installing any Windows-based programs. Then simply compare these configuration files before restarting Windows. It's also a good idea to comment out the line that starts Windows in your AUTOEXEC.BAT until you're sure you have it setup correctly.

Change the line in your AUTOEXEC.BAT from:

```
win
to:
rem win
```

Making a bootable DOS rescue floppy isn't a bad idea either. Windows 3.1 is supposed to handle configuration more smoothly. My sources tell me that the 3.1 beta handles configuration better, but 3.1 still has too many bugs. So for now, backup and lookup, so you don't crapup.

— Nick Anis



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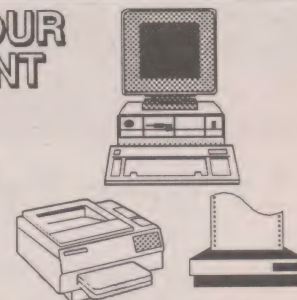
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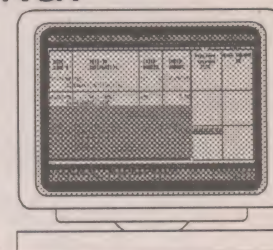
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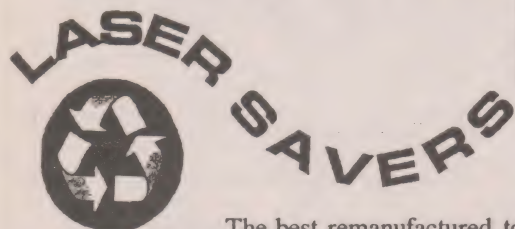
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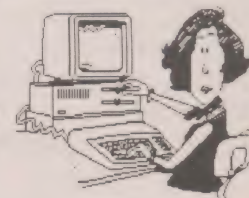
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The PC Library BBS — IBM, 300-14400 baud, Echos, Netmail, Games online. File and Message area, 1.2GB, 24 hrs. 508/966-2032

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The Boston Computer Exchange

Hot Time for Zenith Laptops

It was a Zenith laptop week with the SupersPort-286 trading as the high volume machine. There were more than ten volume contracts closed on the Big Board of the Boston Computer Exchange for Zenith laptop machines. Despite the volume of trade, the price of the machines was remarkably stable. The Zenith SupersPort-286 with 20-megabyte hard drive was up \$25 this week, closing at \$600, and the 40-megabyte model was stable at \$800. The appearance of large volumes of the machines on the supply side meant that there was finally enough equipment to meet the demand that lingers for 286 laptops. With the primary market agog over 386 notebooks, the rest of the computer users are pleased to buy 286 laptops for these prices. These machines still represent the middle-ground computer for the person who simply wants to process words on the road.

Macintosh SE Trading Heats Up

The Macintosh market was very

active for a normally slow January week. The brokers at the Boston Seat on the Exchange are used to slow times in January as most buyers slow down with the cold weather. The Macintosh market was a warm spot. The 40-megabyte SE machine was popular in lots that traded for \$950. While the original SE was a volume leader, the SE/30 with 40-megabyte drive was up \$25 to close the week at \$1,700.

New Seats on the Big Board

The Boston Computer Exchange has opened 18 new licensed traders on the Big Board since Comdex/Fall in October 1991, bringing the total number of licensees to 143. Among the new traders licensed to do business on the national trading facility is SIMTEC Corporation whose rental facilities are trading their excess inventory and buying in volume. The Boston Computer Exchange welcomes the new traders to its international network.

The following prices are for the week ending January 24, 1992.

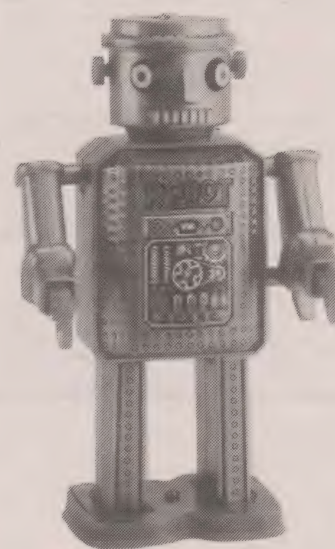
The BoCoEx Index Of Used Computer Prices

Machine	Close	Ask	Bid
IBM AT 239 20MB	550	650	500
IBM AT 339 30MB	750	1000	700
IBM PS/2 Model 50 20MB	950	1000	800
IBM PS/2 Model 50Z 30MB	900	1100	850
IBM PS/2 Model 55 60MB	1800	1900	1700
Compaq Portable III 20MB	650	800	600
Compaq Portable 286 20MB	900	1000	800
Compaq SLT-286 40MB	1200	1300	1000
Compaq LTE-286 20MB	800	1200	700
Compaq LTE-286 40MB	1000	1300	900
Compaq Deskpro 286 40MB	850	1000	800
NEC PowerMate SX+ 40MB	1250	1350	1200
NEC PowerMate SX+ 80MB	1350	1400	1250
Zenith SupersPort-286 20MB	600	600	500
Zenith SupersPort-286 40MB	800	800	750
Macintosh SE 40MB	950	1050	950
Macintosh SE/30 40MB	1700	1750	1600
Macintosh SE/30 80MB	2000	2100	1900
Macintosh IIX 80MB	3000	3250	2800
Macintosh IICX 40MB	1900	2300	1800
Macintosh IICX 80MB	2950	3000	2750
Apple ImageWriter II	250	350	200
Apple LaserWriter IINT	1775	1950	1700
HP LaserJet	425	500	400
HP LaserJet II	850	950	800
Toshiba T-1200HB 20MB	750	900	690
Toshiba T-1600 20MB	600	700	550
Toshiba T-3100 20MB	915	1050	850
Toshiba T-3100 SX 40MB	1750	2000	1750
Toshiba T-5100 40MB	1400	1700	1300

BoCoEx Index prices are based on complete systems with keyboard, monochrome monitor and adapter, less the value of any software or peripherals. Boston Computer Exchange is available at 617/542-4414; Buyer's HotLine, 800/262-6399; fax, 617/542-8849. The BoCoEx Database is on CompuServe: GO BCE, and on the Delphi system: ME BO. BoCoEx Index is available on Fax Yourself Information, 617/542-2345, extension 300.

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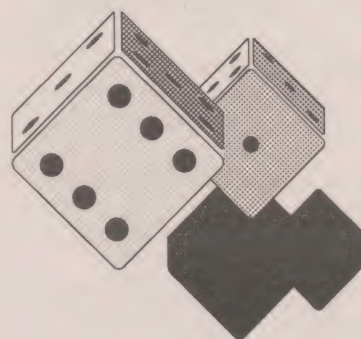
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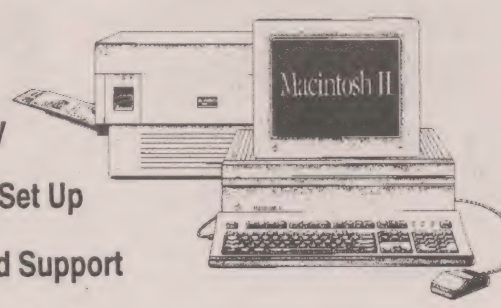
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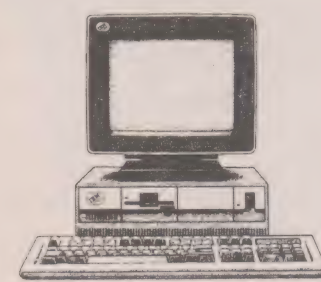
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CALENDAR

Meeting times and locations may change at the last minute; call first for confirmation.

We welcome notices of upcoming events for our Calendar. Notices must be received by the second Friday of the month prior to publication. Please mail information to: Calendar, Boston Computer Currents, 4 Chrysler Road, Natick, MA 01760. Or send your notice via MCI Mail to "MZIENTARA." Or fax to 617/593-2682.

Please note: Boston Computer Society (BCS) listings are courtesy of the BCS. BCS events are for members only; non-members are invited to attend one meeting before joining the Society. BCS headquarters are at One Kendall Square, Cambridge, MA 02139. Telephone 617/252-0600.

February 10

Novell v3.11 System Manager

A three-day (February 10-12) hands-on seminar offered by McAuliffe Office Power! Computer Center, 50 Cherry Street, Burlington, Vt., on the shores of Lake Champlain. Fee: \$895. Call 802/658-9889.

NetWare v3.11 OS Features Review

A two-day (February 10-11) course designed for experienced NetWare v2.x system managers who are upgrading to NetWare v3.11. Presented by Computer Tutor Corp., 15 Court Square, Suite 750, Boston. Fee: \$695. Call 617/964-5858 or 800/649-1449.

February 11

Effective Skills for Technical Managers

A four-day (February 11-14) seminar designed to give new, about-to-be and experienced managers the practical skills needed to lead effective teams of technical professionals. Fee: \$1,895. Presented by Learning Group International (Los Angeles). To be held in Boston. Call 800/421-8166.

BCS Lotus

"Business Graphics." Using Lotus Freelance for Windows and Ami Pro, learn how to use business graphics to make presentations and documents more effective. 7 p.m., Lotus Rogers Auditorium, One Rogers Street, Cambridge, Mass. Call BCS Office at 617/252-0600.

February 12

Ventura Users of Greater Boston (VUGB)

Presentations at the monthly meeting of VUGB will cover typography, as well as the technical side of using fonts. An exciting item will be raffled. 6:45 p.m., Wentworth Technical School, located on the 4th floor of the Xerox Building, 191 Spring Street, Lexington, Mass. VUGB meets the second Wednesday of each month. Call 617/275-3592.

BCS PC Technical

"Demystifying Modems, Fax Modems, and Data Transmissions." Frank Bacon and Ernest Price from Telcor Systems Corp. (Natick, Mass.) discuss modems, faxes, and serial port communications. They define terminology, describe standards, explain error messages and data compression, suggest communications software, and demonstrate high-speed modems and file transfer software. 7 p.m., GTE Laboratories, Auditorium, 40 Sylvan Road, Waltham, Mass. Call Bill Claff at 617/235-9505.

BCS Macintosh

"QuickTime." Now you can cut and paste movies into your documents. Apple Corporation presents QuickTime, the multimedia extension for your Macintosh. 7 p.m., MIT, Building E51, Room 329, Cambridge, Mass. Call BCS Mac Office at 617/625-7080 for details.

February 13

Society for Information Management (SIM), Boston Chapter

"The State of CASE," presented by Linda S. Bodman, president of Schubert Associates, Inc. Luncheon meeting, 12-2 p.m., Marriot Hotel, Newton, Mass. Call 617/237-1570.

EVENT SPOTLIGHT

Seybold Seminars '92

Conference & Showcase

A four-day (February 18-21) conference exploring the future of electronic publishing: industry trends, emerging technologies, practical applications, and best strategies. Topics will include online information to the home, multimedia for publishers, and the safety of computers. Fee: \$1,250 Conference & Showcase. Showcase only: \$30 at the door. Held at the Hynes Center, Boston. Presented by Seybold Seminars (Malibu, Calif.). Call 800/777-6650.

BCS Databases: Client/Server Subgroup

"Oracle Servers." A systems engineer from Oracle presents Oracle's client/server solutions including DBMS and networking products. 7 p.m., BCS Center, Building 1400, One Kendall Square, Cambridge, Mass. Call Beth Gold-Bernstein at 617/863-8589.

February 18

Association for Women in Computing, Greater Boston Chapter

Lynn Woplington speaks on "Creative Problem Solving at Work." Days Inn, Newton. Dinner, 6:30 p.m. Program, 7:30 p.m. Call Mary Delichatsios at 617/762-4300 x2954.

Computer-Based Training

A three-day (February 18-20) seminar taught by instructional psychologist Dr. Ruth Clark. Participants learn to develop effective computer-based training using research-based principles that are independent of any specific authoring system or language. Offered by Information Mapping, Inc., 300 Third Avenue, Waltham, Mass. Call 617/890-7003.

BCS Hypermedia/Optical Disk Publishing

"Fluent Machines." In a joint meeting with the BCS Networking group, David Backer from Fluent Machines demonstrates the Fluency family of products that enable developers to integrate video and audio into both standalone and networked applications. 7 p.m., MIT, Building E51, Room 329, Memorial Drive, Cambridge, Mass. Call Greg Whalen at 508/465-9632.

February 20

PageMaker Technical Workshop for Windows Users

A one-day intensive workshop for experienced PageMaker users, featuring advanced techniques, shortcuts, and tips. Lecture and demo format. Fee: \$295. To be held at the Burlington Marriot. Presented by Datalex Corp. (Amherst, N.H.). Call 800/886-3282.

February 21

PageMaker Technical Workshop for Macintosh Users

A one-day intensive workshop for experienced PageMaker users, featuring advanced techniques, shortcuts, and tips. Lecture and demo format. Fee: \$295. To be held at the Burlington Marriot. Presented by Datalex Corp. (Amherst, N.H.). Call 800/886-3282 for details.

February 24

Windows on NetWare

A two-day (February 24-25) seminar that teaches how to install, configure and optimize Windows on your Novell network. In-class demos. Fee: \$795. Held at The Lenox Hotel, 710 Boylston Street, Boston. Presented by Data-Tech Institute (Clifton, N.J.). Call 201/478-5400.

New Architectures for Enterprise Computing

A three-day (February 24-26) seminar presented by Microsoft University and Technology Transfer Institute (Santa Monica, Calif.). Presents an overview of new technology and an introduction to the building blocks of client-server systems and graphical environments. To be held at the Lafayette Hotel, One Avenue de Lafayette, Boston. Fee: \$1,195. Call 310/394-8305.

Introduction to Lotus 1-2-3 Release 3.1

A two-day (February 24-25) hands-on course offered by The Boston Center for Computer Applications, Inc., 336 Newbury Street, Boston. Fee: \$450. Call 617/247-0538.

February 29

BCS Lap Computers

"Legal Laptops." In a joint meeting with the BCS Legal Group, learn how attorneys John Davey and Neil Aresty are using portables in their legal practice. Even if you aren't an attorney, see how laptops can be tailored for any demanding profession. 11 a.m., BCS Center, Building 1400, One Kendall Square, Cambridge, Mass. Call Al Goldman at 617/527-2820.

MARCH PREVIEW

March 3 - 4

Internetworking With NetWare

A two-day seminar on "The Present State of Novell Data Communications" presented by the Center for Advanced Professional Development (Santa Ana, Calif.). Fee: \$795. To be held at the Hyatt Regency, 575 Memorial Drive, Cambridge, Mass. Call 714/261-0240.

March 7

Southern New Hampshire Area Computer Show & Fleamarket

More than 150 tables of computers and computer-related products. Door prizes will include computer systems and accessories. Money-saving coupons for use at the show will be presented to the first 100 adult attendees. Hours: 9 a.m. to 3:30 p.m. Admission: \$8 for adults, children under 12 free. Held at the Clarion Somerset Hotel off Exit 8 of the Everett Turnpike, Nashua, N.H. Presented by Pegasus Trade Productions (Nashua, N.H.). Call 800/637-2204.

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See page 42 for details.

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By Lincoln Spector

Dr. Deeram Answers More Questions

Whenever I load Windows, CorelDRAW, Ami Pro, dBase IV, and Attack of the Killer RAM Chips together, my system crashes. I figure I must have a conflict somewhere. I enclosed a printout of my AUTOEXEC.BAT file; please tell me what I'm doing wrong.

I was just about to pour a quart of milk on my keyboard when I realized your problem: you printed your AUTOEXEC.BAT on the back of an old shopping list. When I turned it over and found the file listing, I was able to pinpoint your difficulty with ease. Your first command, @ECHO OFF, conflicts with all the ECHO commands that follow it. And then there's this PROMPT \$P\$G line. Do you know what that means? Then how do you expect a simple operating system to understand it? No wonder DOS gets confused and crashes on you!

I'm worried about some of the privacy issues that computers bring up. Do marketing services really have access to my credit card records?

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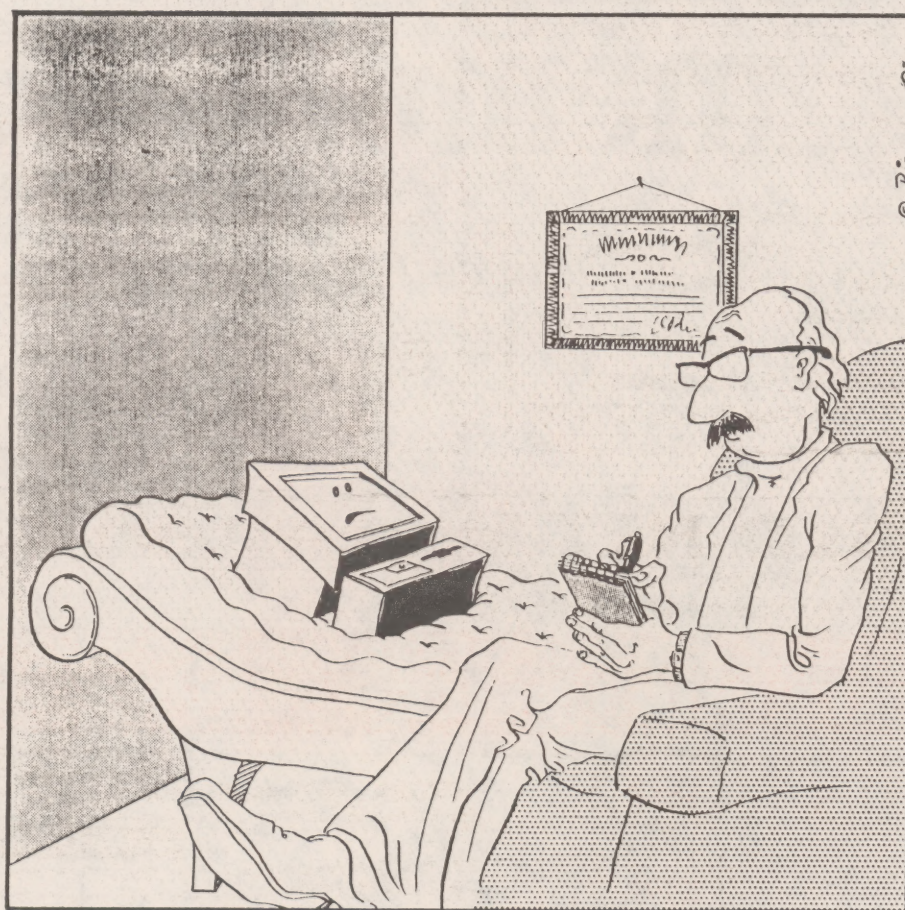
I was about to buy a 33MHz 386, but now I'm told that the chip is already out of date. Is that so? Is it a problem? What do you recommend I buy in its place?

A little more than a year ago, the 386/33 was an amazing CPU guaranteed to zap an entire worksheet in the blink of an eye. But thanks to Intel's 486SX, AMD's 386/40, and my Uncle Bob's 886/13, the 33MHz 386 is definitely over the hill, and likely to earn you derisive laughter from all of your better-informed friends. If you do buy one, just don't mention it at parties.

If you don't go to parties, you'll have to ask yourself if you really need a super-fast processor (and why people don't invite you). The answer to the first question is undoubtedly yes. We all need faster and faster hardware for a very good reason: slower and slower software.

I recently bought SoftHeaded Technology's Grammar Moses grammar checker. But every time I use it, it tells me that my rhyme scheme is off. How do I tell it that I don't want my business letters to rhyme?

It's really no crime to have letters that rhyme. It makes passing the time just a bit more sublime. If you feel that I'm



"WELL DOC, IT ALL STARTED WITH MY FEAR OF MICE..."

talking up from the slime, call the tech support chime. After all, it's your dime.

Is there any hardware available that will let me play music on my laptop?

A dulcimer works fine here. Just put your laptop on your lap and the dulcimer on the laptop. This works much better than a piano.

If you want to play music through your laptop, that's more of a problem. Most sound-reproducing hardware requires an expansion slot, a SCSI port, or a Macintosh.

There is one product that you might find useful: Kreaton Associates' Plug'n'Play Phonebone. Rather than using a slot or SCSI port, the Phonebone plugs directly into your serial port, where it can accept data at a rate of 300 baud. If you like slow music, it's great.

My old 40MB hard disk can't hold my programs and data anymore, and I'm looking for something larger. But all the supposedly larger hard disks I see are actually smaller — I can tell by looking at them. What should I do?

You've discovered one of the greatest hoaxes of the computer age — small disks being sold as big ones. And the problem's not even confined to hard disks! I recently had a salesman try to sell me some floppy disks that weren't only smaller than they're supposed to be, they weren't even floppy! The only way to deal with such people is to scream loudly.

We've recently decided to start laying out our newsletter electronically. Do you recommend PageFaker or Vendetta Publisher?

Traditionally, the argument has been that Vendetta is the better program for long documents like encyclopedias, while PageFaker is best suited for short ones, such as sonnets. If you're working on something in between, you should compromise and buy both programs.

Other than that, a lot depends on your hardware. If you use a Macintosh, don't even consider Vendetta, since it requires DOS 3.1 or a later version. On the other hand, if you have a 286, don't get PageFaker unless you like taking long coffee breaks between commands. Finally, if you're stuck with an old 8088, don't bother with either of these programs; stick to EDLIN and brush up on your printer's escape codes.

Is it true that eating while computing can ruin your keyboard?

It all depends on how sloppy an eater you are. Actually, eating is only one of many practices that can ruin a keyboard. Drinking, smoking, and sex can also do damage.

None of these are the main culprit, however. A recent study by the Branaugh Institute for General Development and Environmentally-Associated Longevity proved that the single biggest contributor to keyboard failure is not food or drink, but the tendency of some users to continually pound on the keys with their fingers.

A friend recently told me I should defragment my hard disk every so often. How does it get fragmented in the first place?

Every time your system crashes, your hard disk gets a little more fragmented, especially if your system crashes onto cement from a great height.

Are you desperate to see your problems appear in print? Do you have any computer-related questions you'd like answered by a professional writer? Are you too cheap to hire a real consultant? If so, send your questions to Ask Dr. Deeram. If we use your question, you'll receive a free 486/33 motherboard, ready to install in your computer as soon as you've added circuitry and chips.

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Lincoln Spector is the author's real name, appearing on both his driver's license and his birth certificate. An associate editor at PC World, Lincoln can be reached via MCI Mail as "LSPECTOR."

Gigglebytes is a satirical column loosely based on computer industry events, trends and people. The opinions expressed in this column are the writer's and do not necessarily reflect those of Computer Currents.

New QEMM-386 v6.

"It's nothing less than a dream come true"
—Steve Gibson, InfoWorld 8/26/91

Suddenly PC users have a lot of memory managers to choose from. Seems that everyone has figured out what users have been telling us for years: they need every last 'K' of available memory between 640K and 1 megabyte—especially if they're running on a network. Or using TSRs.

Our new QEMM-386 version 6 is the best way to get the most out of memory. It 'pools' all your memory so that it's available in whatever form your programs need—expanded or extended. You don't even need to know the difference. QEMM does it all for you. Instantly. Whereas DOS 5, for example, requires you to figure out what you need, then manually allocate memory and re-boot for every change.

As for the all-important 'conventional' memory area, our new version 6 increases the amount of memory freed-up. Our exclusive 'optimize' feature automatically seeks out TSRs and device drivers and moves them into high memory—the area between 640K and 1 megabyte. All you have to do is type 'optimize'.

#1

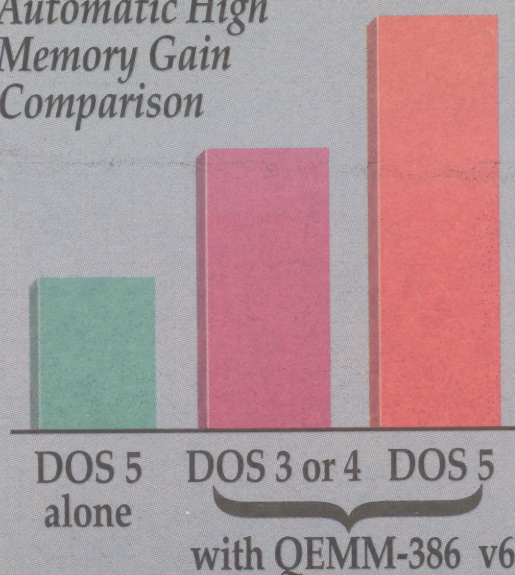
QEMM is the top-selling PC utility.

QEMM-386 v6 finds more high memory than any other memory manager. *Byte Magazine's* tests showed it produced net memory gains of 21K to 132K over DOS 5.0 alone, for instance.

There's no better way to manage your memory.

4 WEEK
ANALYST'S CHOICE

What you can expect Automatic High Memory Gain Comparison



Stealth takes you to network and TSR heaven.

Our breakthrough 'Stealth' technology makes available areas normally taken up by ROM. Areas that QEMM-386 can use to load memory-hogging TSRs and drivers. Big programs can get the memory

they need to run fast and efficiently. And you get to have your TSRs.

Not every PC can benefit from Stealth. But every PC can benefit from 'Squeeze'—our new feature to manage those TSRs that need more memory at start up and less when they're resident.

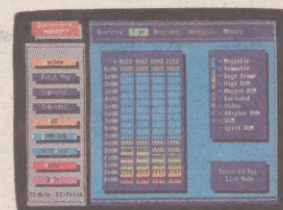
Memory allocation is temporarily increased, then squeezed down after it's needed.

QEMM can use idle video memory to produce a further 96K gain on EGA and VGA systems when running character-based programs.

A priceless \$60 bonus.

QEMM comes with Quarterdeck Manifest, the award-winning analysis program that makes it easy to see what's 'under the hood' of your PC.

Manifest does for memory what PC Tools Deluxe does for disks.



See and understand how your PC works with Manifest.

Benefits for Windows, too.

Whether you're running DOS 3, 4, 5, or Windows, QEMM can improve your 386/486's performance.

That means you may not need a faster CPU. You may not need more RAM. QEMM makes your favorite programs work better by giving them more memory to run in.

QEMM helps you get the most out of the software you own today.

Quarterdeck

* Here we are, being cautious again: Because Stealth alters the memory mapping of your PC, how much high memory you'll gain depends on the 'BIOS' in your computer. We've tested Stealth on a wide range of PCs, from Compaqs to PS/2s; ALRs, Toshibas and many others. Typically, an additional 211K becomes available between 640K and 1 megabyte. Depending on your PC, your memory gain may vary.

Electronics Boutique
Burlington (617) 229-2880

Atlantic Computers
Waltham (617) 893-0040

Compu Add
Burlington (617) 272-3344

The Bit Bucket
Sudbury (508) 443-9731

Egghead Discount Software
Cambridge (617) 354-3051
Boston (617) 426-0540

The Computer Gallery
Randolph (617) 986-1004

Computer Marketplace
Tewksbury (800) 287-5317

Penguin Computer
Norwood (617) 769-9922

Software Etc.
Worcester (508) 852-2114